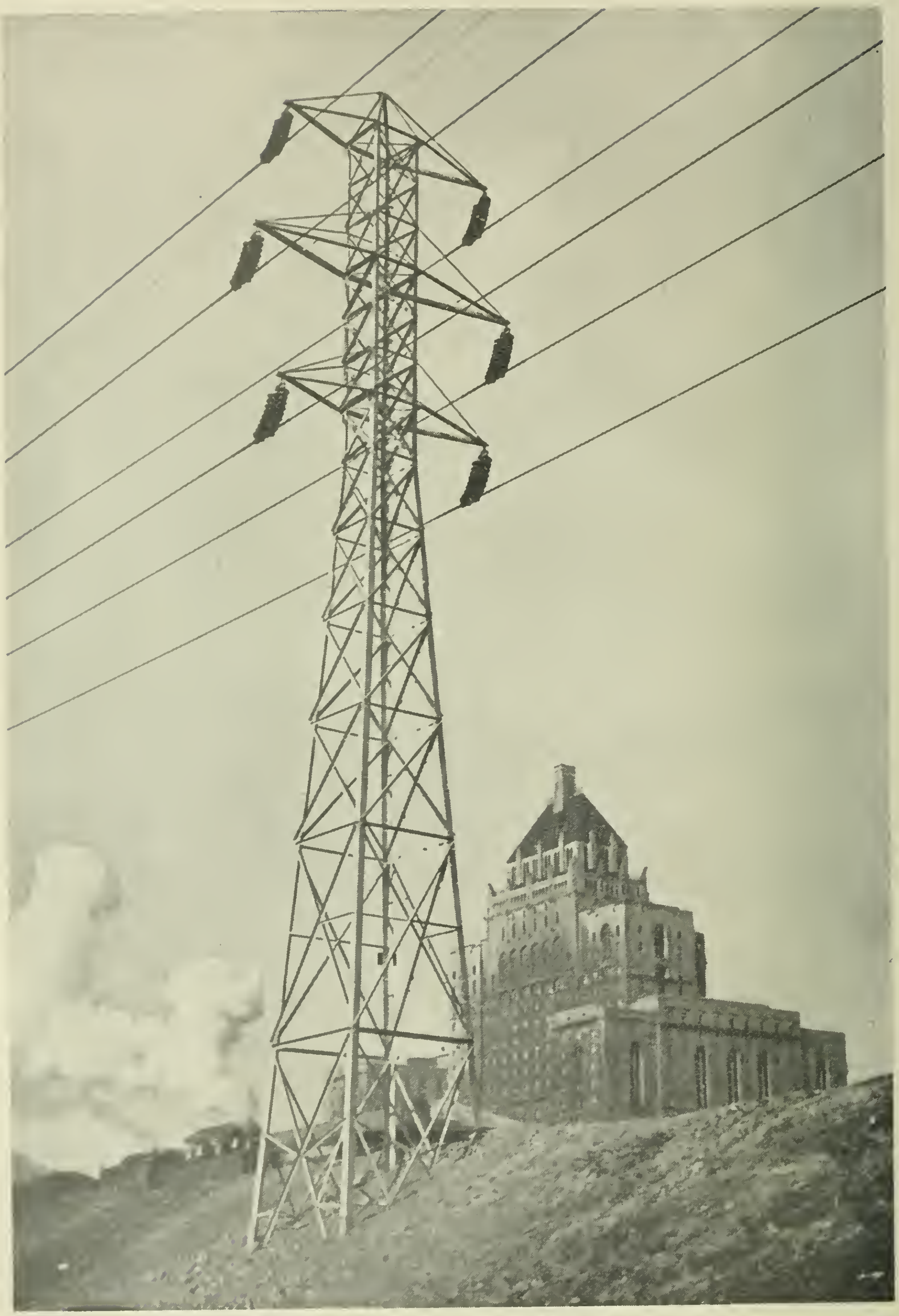

TIE-LINE TOWER IN TORONTO

This tie-line connects Leaside transformer station, terminus of the eastern 220,000-volt transmission line bringing power from the province of Quebec, with Strachan transformer station, a terminus of the 110,000-volt lines from Niagara.—Royal York hotel in background

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Ontario. Legislative Assembly
" Sessional papers Vol. 71, pt. 5, 1939

THIRTY-FIRST ANNUAL REPORT

OF

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

FOR THE YEAR ENDED OCTOBER 31st

1938

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ONTARIO

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

TORONTO
Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty
1939

THE HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO

T. H. Hogg, B.A.Sc., C.E., D.Eng.	*Chairman and Chief Engineer*
Hon. Wm. L. Houck, B.Sc., M.L.A.	*Vice-Chairman*
J. Albert Smith, M.L.A.	*Commissioner*
Osborne Mitchell	*Secretary*

CHAIRMAN'S LETTER OF TRANSMITTAL

To His Honour

The Honourable Albert Matthews, LL.D.,

Lieutenant-Governor of Ontario

May It Please Your Honour:

The undersigned respectfully presents the Thirty-First Annual Report of The Hydro-Electric Power Commission of Ontario for the fiscal year which ended October 31, 1938.

The record of the Commission's work presented in this Annual Report relates to three principal fields—the co-operative municipal field, the field of rural supply, and the Northern Ontario field. The first two cover the Commission's activities on behalf of the co-operative systems, and the last relates to its trustee-ship of the Northern Ontario Properties on behalf of the Province. Throughout the various sections of the Report dealing broadly with physical operation of the plants, constructional activities and financial statements, these fields of activity are clearly differentiated.

The Report also presents for the calendar year 1938 financial statements and statistical data relating to the municipal electric utilities operating in conjunction with the several co-operative systems for the supply of electrical service throughout the Province.

Operating Conditions

Operation of the plants on the Niagara river was severely affected by an unprecedented ice jam in the lower river in January, which backed up the water to such heights that on January 26, the Ontario Power plant was flooded with water and ice and completely put out of commission. The output of the Queenston plant at times was curtailed due to high tailwater. This condition was relieved about the middle of March, when a large portion of the ice jam in the river below the plant moved out.

Apart from the disaster to the Ontario Power plant, operating conditions throughout the several systems of the Commission was satisfactory. Precipitation was above normal and stream flow was adequate to meet all demands.

In the Niagara system, notwithstanding the loss of the output of the Ontario Power plant, the Commission was able to maintain full delivery of primary power to all customers.

To supplement the output of the power plants on the Georgian Bay system, power was transferred from the Niagara system, and purchased from the Water, Light & Power Commission of Orillia. With the completion of the Ragged Rapids plant, one unit of which was placed in service on October 18, 1938, it is anticipated that the necessary assistance from outside sources can be supplied from the Niagara system, through the Hanover frequency-changer set, for some time to come.

The output available from the generating plants of the Eastern Ontario system, together with the additional 18,000 horsepower which under the revised agreement with the Gatineau Power Company became available on October 1, 1938, enabled all primary power demands to be met. Certain quantities of secondary power were also available. These were supplemented by transfer of power from the Niagara system, sufficient in quantity to meet fully the secondary power demands of the Eastern Ontario system.

In the Thunder Bay system no difficulties were experienced in meeting the primary demands for power, notwithstanding the fact that in September the primary peak load, due to exceptional demands by the grain trade, reached the highest total on record. Precipitation on the watershed of the Nipigon river was about 16 per cent above average, and the operation of the Cameron Falls and Alexander developments was satisfactory.

The market for secondary power in the Thunder Bay system, although less than the previous year, was great enough at times to use more power than could be supplied by the Nipigon river developments. Consequently the arrangements previously in force with the Abitibi Power and Paper Company were continued throughout the year. These arrangements permitted the pulp and paper mills under the control of the above Company to obtain over the Commission's lines and stations a supply of secondary power from the Kaministiquia Power Company.

In Northern Ontario water storage and stream flow conditions associated with the operation of the power plants serving the various districts were satisfactory. The stream flow on the Abitibi river was adequate to meet all primary and secondary demands of the Abitibi district. The addition in March, 1938, of a fourth transformer bank at the Abitibi canyon generating station permits concurrent operation of four of the five 60,000 horsepower generators. The storage dam to control Frederick House and Night Hawk lakes was completed in time to impound the Spring run-off in 1938. Acquisition of the Crystal Falls generating station in 1937 relieved the power situation in the Sudbury and Nipissing districts, and greatly improved operating conditions.

Rehabilitation of the Ontario Power Plant

When the flood that inundated the Ontario Power plant receded twenty-four hours later, it left behind it about 7,000 tons of ice and a heavy deposit of oil over everything that had been submerged.

Rehabilitation of the Ontario Power plant was an undertaking of major proportions, which taxed the ingenuity of the Commission's engineers. In 1909 all attempts to dry the large generators submerged in a similar flood had been unsuccessful, and the consensus of opinion among those who had had recent experience of flood-damaged plants elsewhere was that attempts to dry out the large generators would not prove successful. However, the engineers responsible devised new methods and ingenious apparatus, and their efforts were rewarded by complete success.

Elsewhere in the Report a summary is given of the steps taken to restore to service the fifteen main units and all the auxilliary apparatus. To the engineers of the Commission much credit is due for the success attained in this difficult task.

Load Conditions

The general upward trend of the aggregate primary loads of the co-operative systems and Northern Ontario Properites which had been experienced since the major depression of 1932, flattened out in the latter part of 1937, and then showed a slight recession until near the end of the fiscal year which ended in October last. A comparison of the October, 1938, primary peak with that of October, 1937 for all systems and the Northern Ontario Properties showed an increase of 1.7 per cent. Following the end of the fiscal year an upward trend became apparent.

In the Niagara system, about four-fifths of the primary load represents load supplied to municipal utilities; the balance goes to large industrial consumers of the system, supplied direct by the Commission, chiefly electro-chemical and electro-metallurgical industries along the Niagara river. These large industries are very sensitive to industrial conditions in the United States and their power requirements in 1938 were greatly reduced. The municipal load therefore provides the best barometer of general conditions throughout southern Ontario. The winter peak of the high-tension municipal load which occurred in December was 6.2 per cent higher than the winter peak of 1937-1938.

The peak load of the Georgian Bay system occurs in the summer months and in 1938 this primary peak load was the highest ever carried. It occurred in the month of July, and was 8.4 per cent higher than the peak load of the previous summer. The primary peak of the Eastern Ontario system which occurs in the winter was nearly 5.0 per cent higher than the winter peak of 1937-1938. In the Thunder Bay system, due to the movement of the grain trade, the peak load in 1938 occurred in the month of September, and was the highest primary load ever carried by the Thunder Bay system. It exceeded the primary peak load of 1937 by 7.9 per cent.

One of the more encouraging features of the past year's operations was the growth in load in the districts served by the Northern Ontario Properties. In these districts, which serve mining developments and the communities dependent upon them, the primary peak load in December, 1938, was the highest on record. It was 26 per cent higher than the primary peak of December, 1937.

DISTRIBUTION OF PRIMARY POWER TO SYSTEMS

20-Minute Peak Horsepower—System Coincident Primary Peaks

System	1937	1938
	October	
Niagara system—25-cycle	1,036,997	1,040,214
Dominion Power & Transmission division—66⅔-cycle	57,507	46,515
Georgian Bay system	29,310	30,891
Eastern Ontario system	125,395	128,586
Thunder Bay system	88,800	93,606
Manitoulin rural power district	137	205
Northern Ontario Properties:		
Nipissing district	4,812	4,857
Sudbury district	14,611	17,895
Abitibi district	93,834	113,160
Patricia district	5,013	5,697
St. Joseph district	2,708	2,989
Total	1,459,124	1,484,615
	December	
Niagara system—25-cycle	1,070,778	1,112,466
Dominion Power & Transmission division—66⅔-cycle	56,032	48,123
Georgian Bay system	31,314	34,011
Eastern Ontario system	124,718	132,001
Thunder Bay system	85,235	83,773
Manitoulin rural power district	141	257
Northern Ontario Properties:		
Nipissing district	4,705	5,255
Sudbury district	16,153	17,954
Abitibi district	95,576	124,203
Patricia district	5,201	6,167
St. Joseph district	2,761	3,029
Total	1,492,614	1,567,239

Another encouraging feature of last year's operations was the continued phenomenal growth in the distribution of power to the rural power districts. The peak of the rural demand which occurs in the month of August was 15 per cent higher in 1938 than the corresponding load of 1937.

The total load in December, 1938, for all co-operative systems and the Northern Ontario Properties, including both primary and secondary loads, reached 1,954,083 horsepower, the highest ever carried by the systems of the Commission, and 9.0 per cent above the December peak of 1937.

The accompanying tabulation gives, for the months of October and December, 1937 and 1938, the primary peak loads of the co-operative systems and of the several districts of the Northern Ontario Properties. It also gives similar data for the total primary and secondary loads.

DISTRIBUTION OF POWER TO SYSTEMS—TOTAL PRIMARY AND SECONDARY

20-MINUTE PEAK HORSEPOWER—SYSTEM COINCIDENT PEAKS

System	1937	1938
	October	
Niagara system—25-cycle	1,126,675	1,259,115
Dominion Power & Transmission division—66⅔-cycle	57,507	46,515
Georgian Bay system	29,310	30,891
Eastern Ontario system	129,584	159,249
Thunder Bay system	134,678	131,394
Manitoulin rural power district	137	205
Northern Ontario Properties:		
Nipissing district	4,812	4,857
Sudbury district	14,611	17,895
Abitibi district	143,432	172,409
Patricia district	5,013	5,697
St. Joseph district	2,708	2,989
Total	1,648,467	1,831,216
	December	
Niagara system—25-cycle	1,235,523	1,359,786
Dominion Power & Transmission division—66⅔-cycle	56,032	48,123
Georgian Bay system	31,314	34,011
Eastern Ontario system	149,853	161,103
Thunder Bay system	132,038	132,399
Manitoulin rural power district	141	257
Northern Ontario Properties:		
Nipissing district	4,705	5,255
Sudbury district	16,153	17,954
Abitibi district	159,517	185,999
Patricia district	5,201	6,167
St. Joseph district	2,761	3,029
Total	1,793,238	1,954,083

Reliability of Service

Year by year the demand for reliability and continuity of service grows more exacting, and this demand is equally insistent from the rural power districts and from the urban communities. Reliability of service depends upon many factors. Several sources of power, preferably situated in widely separated localities, are much less liable to be simultaneously affected than one or two sources of the same aggregate capacity. There must, of course, be adequate reserve capacity. A thoroughly co-ordinated and inter-connected transmission network equipped with modern relay and protective devices is necessary. But above all, there must be a consistent policy of insistence upon the highest standard of construction and maintenance. To cope with breakdowns, emergency trucks and line repair equipment under trained personnel, strategically placed, must at all times be ready for instant action.

It is gratifying to the Commission to be able to report that interruptions to service during the past year were almost negligible, both in extent and duration. The splendid service record obtained for all systems, with their dependence solely upon hydro-electric plants, is largely due to consistent adherence to policies established on sound underlying principles.

Contributing to reliability of service are the studies carried out by the testing and research laboratories of the Commission. The studies made in connection with the design, construction and operation of the systems have resulted in improvements of materials and methods of operation. The programme of continuous and systematic research is an important means of protecting the Commission's investments, since it helps to secure material and equipment of the highest quality, and to obtain from this equipment the maximum life and most efficient service.

Additions to Generating Equipment

The Ragged Rapids development on the Musquash river about four miles below Bala was completed and came into service late in October, when an interesting opening ceremony was arranged to which representatives of the partner municipalities of the Georgian Bay system and others interested were invited.

The Ragged Rapids plant has a capacity of 10,000 horsepower and increases the total generating capacity available to the system to an amount approximating the present peak load demand. The power house contains two generating units, the turbine runners being of the Kaplan type with adjustable propeller blades which give a high efficiency at part loads.

Continuing the systematic programme of maintenance work on the power plants of the Wanapitei river, the timber dam on the Coniston development which was built in 1905 was replaced by a concrete structure.

Many generating stations of the Commission in Northern Ontario are situated in isolated districts. Even those stations constructed to serve new mining districts are often of necessity far from the new towns and settlements associated with the mines. To retain the services of satisfactory operators at these generating plants it is desirable to provide accomodation that will make living in these out-of-the-way places as attractive as possible. During the past year or two the Commission has built additional houses at several stations in the Northern districts. Fourteen houses at Abitibi Canyon and seven at Ear Falls are practically completed. A number of houses and colony buildings are also being erected at Cameron Falls on the Nipigon river. Where considered advisable, schoolhouses, recreation rooms, stores, hospital and other buildings are included, and provision is made for water supply and electric service, sewage disposal and fire protection.

Water Storage

In Northern Ontario an important water storage project was completed and brought into service. The project consists of a dam some fourteen miles below Connaught, which restores the level of Frederick House lake. This lake was drained twenty-nine years ago, and the new dam creates in it, and Night Hawk lake above it, a storage reservoir to augment the flow of the Abitibi river in periods of low water for the benefit of the Abitibi Canyon development. The dam was completed in time to impound the spring run-off of the Frederick

House river. The project increases the dependable capacity of the Abitibi development by 40,000 horsepower.

Surveys for additional power development projects were made in various areas of Northern Ontario. On behalf of the Province the Commission completed the dams and other hydraulic works in connection with the Long Lac development scheme. This scheme comprises a dam north of Long Lac on the Kenogami river, a tributary of the Albany river, and a control dam and diversion channel south of Long lake. The immediate function of the work is to make possible the economical transportation to lake Superior of pulpwood from an area tributary to Long lake and the Kenogami river. If it is desirable later, these works will permit the diversion of water from this watershed to lake Superior. This diversion, however, would require international agreement.

Purchased Power

At the beginning of the fiscal year with which this report deals, in November and December, 1937, a determined effort was made to bring to a satisfactory settlement the disputes with the Quebec power companies respecting the purchase of supplementary power supplies. As a result of discussion and negotiations new agreements were entered into with Gatineau Power Company, Maclaren-Quebec Power Company, and The Beauharnois Light, Heat and Power Company which it is believed are fair to the companies and satisfactory to the Commission. The termination of the unprofitable litigation was to both parties a major gain, effected by the new contracts. In addition, the companies ended the uncertainty with respect to a market for their power, but, recognizing the changed conditions resulting from the long economic depression, agreed to a reduction in the price for power, and to a modification of certain other terms of the contracts.

During the past year the supplies of purchased power gave the Commission valuable and readily available power reserves. The necessity for such reserves was brought forcibly to attention by the terrific ice jam in the Niagara river, which, early in 1938, brought down the Falls View bridge, flooded the Ontario Power plant and disabled it for months, while at the same time the output of the Commission's other Niagara river generating stations was curtailed, so that the maximum simultaneous loss to the Commission in generating capacity approximated 255,000 horsepower. The settlement with the Quebec power companies was desirable and necessary, and, all things considered, the terms were favourable to the Commission. The following tabulation summarizes the power supplies arranged for under the new agreements.

Gatineau Power Company and Gatineau Transmission Company: 25-cycle Power Contract. Maximum supply 260,000 horsepower, to be supplied as follows—December 1, 1937, 165,000 horsepower; November 1, 1938, 200,000 horsepower; November 1, 1939 to November 30, 1970, 260,000 horsepower.

Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company, Limited: Maximum [supply 250,000 horsepower, to be supplied as follows—December 14, 1937, 125,000 horsepower; November 1, 1938, 150,000 horsepower; November 1, 1941, 200,000 horsepower; November 1, 1942, 225,000 horsepower; November 1, 1943 to November 1, 1976, 250,000 horsepower.

Ottawa Valley Power Company: This contract for 96,000 horsepower was unchanged.

Maclaren-Quebec Power Company and The James Maclaren Company, Limited: Maximum supply 100,000 horsepower to be supplied as follows—December 14, 1937, 40,000 horsepower; November 1, 1938, 60,000 horsepower; November 1, 1940, 80,000 horsepower; November 1, 1944 to October 31, 1970, 100,000 horsepower.

Gatineau Power Company and Gatineau Transmission Company: 60-cycle power contract. Maximum supply 60,000 horsepower as follows—December 1, 1937, 42,000 horsepower; October 1, 1938 to November 30, 1970, 60,000 horsepower.

The Eastern Ontario system took delivery of the last block of 60-cycle power available under the Gatineau contract, namely, 18,000 horsepower, on October 1, 1938, and this power will take care of the 1939 increase in load and act as a reserve for the system.

Increased Transmission and Distribution Equipment

The transmission and distribution facilities of the several systems were extended and strengthened in many districts. In the Niagara system the capacity of the Leaside transformer station has been increased to 420,000 kv-a by the installation of two 75,000-kv-a banks of transformers. A double circuit 110,000-volt line was completed between the transformer stations at Leaside and Strachan Avenue, to give an additional tie from the eastern power sources into the Niagara system. Eight new distributing stations were installed throughout the system and in seventeen others the capacity was increased.

In the Georgian Bay system, in order to meet conditions which it was anticipated would arise with the completion of the new 10,000 horsepower development at Ragged Rapids, the transmission networks of the system had been substantially strengthened in 1937. It was only necessary to complete this work during 1938. Additional transformer capacity was installed at eleven distribution stations.

In the Eastern Ontario system much has already been accomplished in the direction of highly reliable inter-connections. Among the more recent additions are the Madawaska tie, in the form of a 33,000-volt transmission line from Carleton Place to Arnprior, and the 110,000-volt Chats Falls-Trenton line. The Madawaska tie has been valuable in two ways. First, it made available to the system as a whole the surplus capacity in the Calabogie plant, over and above the requirements of the Madawaska district. Second, it enabled the rest of the system to assist the Madawaska district for a period of four months in 1938, during which the Calabogie station was disabled owing to the damage of generators by lightning. The Chats Falls-Trenton line has greatly facilitated the transfer of power in connection with the operation of the Eastern Ontario system. During the past year four new distributing stations were installed, and the capacity of four others increased.

In the Thunder Bay system the 9,000-kv-a Long Lac transformer station was completed for the supply of power to the mining companies in that area, and two new companies were served.

The growth of the mining load in Northern Ontario necessitated the installation of new transformer and distributing stations, and the enlargement of others with the installation of additional equipment in many cases.

In all of the systems of the Commission a total of more than 135 route miles of transmission lines were constructed, 8 miles of which were for operation at 110,000 volts.

Rural Electrical Service

The rural construction programme undertaken by the Commission during the year 1938 exceeded by a substantial margin the record of 1937, which was the previous high mark. The rural primary lines approved for construction in 1938 approximated 2,660 miles to serve more than 14,000 additional customers. The previous records were 2,300 miles in 1937 and 1,894 miles in 1930. Most of these lines were actually constructed during the year, or were under construction at the year's end. Due to the exceptionally heavy programme a few lines approved in 1938 will not be completed until early in 1939.

Due chiefly to the lowering of the service charge and the reduced requirements respecting the number of consumers per mile of line, the extension of service in rural power districts has in the past two or three years shown phenomenal growth. At the present time there are approximately 15,800 miles of rural lines serving 100,000 consumers, distributed among nearly 500 municipalities, including townships and police villages.

The aggregate load supplied to all rural Hydro consumers in the Province indicates by its substantial increase a growing appreciation of electrical service and an ability to install equipment to utilize this service. The average load for 1937 amounted to 45,506 horsepower. This increased during the year 1938 to 53,383 horsepower, or an increase of 17.3 per cent during the year. The present intense interest in the extension of rural service promises to continue. It is expected that during the year 1939 the rural construction programme will continue at the same pace as that of the last few years.

Capital Expenditures

The extensions to generating stations, transmission lines and distribution networks, storage works, etc., during the year, have required capital expenditure of $10,876,458.83 as follows:

CAPITAL ADDITIONS YEAR ENDED OCTOBER 31, 1938

Niagara system	$ 3,238,679.86
Georgian Bay system	1,438,364.80
Eastern Ontario system	682,015.04
Thunder Bay system	232,272.70
Manitoulin and Nipissing rural power districts	41,362.69
Northern Ontario Properties	2,945,951.23
Service and administrative buildings and equipment	100,037.28
	$8,678,683.60
Provincial rural grant (To October 31)	2,197,775.23
Total	$10,876,458.83

Sales Promotion

During the first two decades of the Hydro enterprise continuous rapid growth took place, stimulated by a succession of exceptional causes, terminating in the economic boom of the late twenty's. The chief problem of the Commission during the first twenty years of its existence was that of providing sufficient power to meet the ever-pressing demand. The economic depression ended this period and the return of better times finds the Commission with ample supplies of power secured for some years ahead. One of the problems facing the Commission at the present time, therefore, is to make known to all Ontario's citizens the nature of the benefits which they can derive from making the fullest possible use in domestic and industrial fields of the low-cost power now available.

For the past few years, therefore, the Commission has devoted more attention to the promotion of the use of electricity in the home, on the farm, and in commercial institutions. During 1938 various campaigns were carried on in co-operation with the municipal utilities and the manufacturers of electrical equipment. Organization and advertising assistance was provided to the municipalities to conduct an electric range campaign, a water heater campaign, and a better lighting campaign, and the Commission conducted similar campaigns in the rural power districts.

The Commission plans to enlarge its activities in the promotional field, and has appointed a director of Sales Promotion, who is organizing a department to be responsible for advertising and promotional work. This department will form a co-ordinating medium uniting the efforts of the municipal Hydro utilities, The Hydro-Electric Power Commission and other branches of the electrical industry in the Province. By such united effort the maximum results should be obtained.

Capital Investment

The total investment of The Hydro-Electric Power Commission of Ontario in power undertakings and hydro-electric railways is $314,768,081.30 exclusive of government grants in respect of construction of rural power districts' lines ($14,149,666.86); and the investment of the municipalities in distributing systems and other assets is $122,053,495.27, making in power and hydro-electric railway undertakings a total investment of $436,821,576.57.

The following statement shows the capital invested in the respective systems, districts and municipal undertakings, etc.:

Niagara system (including Hamilton street railway)	$214,698,746.89
Georgian Bay system	11,008,373.01
Eastern Ontario system	22,011,287.79
Thunder Bay system	19,709,666.87
Manitoulin rural power district	74,614.88
Nipissing rural power districts	44,695.60
Bonnechere storage	51,741.88
Office and service buildings	3,207,839.58
Construction plant and inventories	3,085,355.01
Preliminary surveys—St. Lawrence, Ottawa and Ogoki rivers	1,182,302.67
	$275,074,624.18
Northern Ontario Properties—Operated by H-E.P.C. on behalf of the Province of Ontario	37,010,269.88
Northern Ontario Properties—Construction plant and inventories	127,886.51
Guelph Radial Railway—Operated by H-E.P.C. on behalf of the Municipality of Guelph	453,433.33
Toronto-Port Credit-St. Catharines Radial Railways	2,101,867.40
	$314,768,081.30
Municipalities' distribution system	98,101,256.69
Other assets of municipal Hydro utilities	23,952,238.58
	$436,821,576.57

Reserves of Commission and Municipal Electrical Utilities

The total reserves of the Commission and the municipal electric utilities for depreciation, contingencies, stabilization of rates, sinking fund and insurance purposes amount to $200,103,382.07, made up as follows:

Niagara system (including Hamilton street railways)	$ 81,328,565.42
Georgian Bay system	4,675,832.39
Eastern Ontario system	9,144,181.83
Thunder Bay system	6,056,354.93
Manitoulin rural power district	11,120.13
Nipissing rural power districts	13,703.44
Office and service buildings and equipment	994,144.29
Bonnechere storage	13,717.74
Total reserves in respect of Commission's properties	$102,237,620.17
Northern Ontario Properties	5,034,104.69
Guelph Radial Railway	214,799.84
Fire insurance reserve	72,441.34
Miscellaneous reserves	454,453.53
Employers' liability insurance, and staff pension reserves	6,588,155.84
Total reserves of the Commission	$114,601,575.41
Total reserves and surplus of municipal electric utilities	85,501,806.66
Total Commission and municipal reserves	$200,103,382.07

Financial Operating Results for 1938

During the fiscal year 1938 the interim rates per horsepower, which are set by the Commission as a basis for the monthly levies towards the total cost of power as determined at the end of the year, remained at their lowered level. It will be recalled that in August, 1937, on the Niagara and Eastern Ontario systems, a substantial reduction was made in the interim rate to municipalities. This reduction in the interim rate was continued throughout the year 1938.

The revenue in 1938, therefore, reflects the fact that for the first nine months of the year rates to municipalities of the Niagara and Eastern Ontario systems were lower than in the corresponding months of 1937. This reduction in revenue to The Hydro-Electric Power Commission of Ontario by reason of reduced rates, involves, of course, no actual loss to consumers. On the contrary, the decrease in revenue to the Commission represents a gain to the Niagara system utilities which is ultimately passed on to the consumers, in lower rates or in other ways.

The industrial recession in the United States had a marked effect in the later months of the year upon the Commission's sales of power to large electrochemical and electro-metallurgical companies in the Niagara area, resulting in substantial curtailment of revenue compared with what earlier had been indicated as probable from this source.

During the fiscal year there was an increase of two million dollars in the cost of purchased power from the Quebec contracts settlement. This, of course, was foreseen when the agreements were revised. Notwithstanding this increase in Niagara system expenses and decrease in revenue in 1938, the Commission was able to set up the full sinking fund requirement, and normal depreciation after meeting all operating, maintenance and interest expenses. The amount contributed to the contingencies reserve was also approximately the same as in 1937. During 1937 two and one-third million dollars were set up in a rate stabilization reserve. In 1938 no contribution from revenue has been made to this reserve in the Niagara system. At the present time, however, the Commission has over four and a half million dollars in its Niagara system rate stabilization fund. This fund was created for the purpose of stabilizing rates and differs from other reserves in that it is not augmented year by year and every year regardless of the conditions which led to its creation. The significant

COMPARATIVE FINANCIAL STATEMENTS

NIAGARA SYSTEM

	1937	1938
	$ c.	$ c.
OPERATING EXPENSES AND FIXED CHARGES		
Power purchased	3,836,382.42	5,786,911.41
Operation, maintenance and administration	4,491,192.50	4,439,228.79
Interest	9,507,517.24	9,512,385.19
Provision for depreciation and obsolescence	1,535,172.54	1,558,882.56
Provision for contingencies	604,061.68	604,442.27
Provision for stabilization of rates	2,337,400.00	....
Sinking fund	2,116,646.19	2,201,335.71
TOTAL COST OF POWER	24,428,372.57	24,103,185.93
REVENUE from municipalities at interim rates, from rural consumers and from private customers under flat rate contracts	24,703,427.00	23,931,458.03
Net balance credited or (charged) to municipalities under cost contracts	275,054.43	(171,727.90)

EASTERN ONTARIO SYSTEM

	1937	1938
	$ c.	$ c.
OPERATING EXPENSES AND FIXED CHARGES		
Power purchased	860,445.93	905,233.97
Operation, maintenance and administration	869,431.57	938,595.30
Interest	899,144.29	979,566.89
Provision for depreciation and obsolescence	233,212.79	261,820.01
Provision for contingencies	59,938.67	66,627.95
Provision for stabilization of rates	240,499.00	81,494.60
Sinking fund	194,453.23	230,069.37
TOTAL COST OF POWER	3,357,125.48	3,463,408.09
REVENUE from municipalities at interim rates, from rural consumers and from private customers under flat rate contracts	3,480,076.27	3,564,306.86
Net balance credited to municipalities under cost contracts	122,950.79	100,898.77

fact with respect to 1938 operations is that there has been no withdrawal from the rate stabilization fund.

The year's operations on the other systems of the Commission and the amounts placed to reserves were satisfactory. After meeting all operating expenses the Commission added to its financial reserves, including those for the Northern Ontario Properties, insurance, workmen's compensation and staff pension provisions, the sum of about eleven million dollars.

On this and facing page are given comparative financial statements for the years 1937 and 1938 respecting the four co-operative systems of the Commission.

RESPECTING THE SYSTEMS OF THE COMMISSION

GEORGIAN BAY SYSTEM

	1937	1938
	$ c.	$ c.
Operating Expenses and Fixed Charges		
Power purchased	56,168.59	53,649.21
Operation, maintenance and administration	407,895.94	471,050.65
Interest	394,273.33	404,626.36
Provision for depreciation and obsolescence	121,371.85	133,878.03
Provision for contingencies	28,221.24	29,247.78
Provision for stabilization of rates	79,548.60	86,648.10
Sinking fund	92,039.78	99,052.44
TOTAL COST OF POWER	1,179,519.33	1,278,152.57
REVENUE from municipalities at interim rates, from rural consumers and from private customers under flat rate contracts	1,204,168.95	1,333,384.79
Net balance credited to municipalities under cost contracts	24,649.62	55,232.22

THUNDER BAY SYSTEM

	1937	1938
	$ c.	$ c.
Operating Expenses and Fixed Charges		
Operation, maintenance and administration	303,862.40	355,919.97
Interest	882,602.58	895,768.34
Provision for depreciation and obsolescence	159,220.92	159,990.02
Provision for contingencies	85,706.48	85,852.37
Provision for stabilization of rates	123,423.00	....
Sinking fund	253,889.59	283,441.03
TOTAL COST OF POWER	1,808,704.97	1,780,971.73
REVENUE from municipalities at interim rates, from rural consumers and from private customers under flat rate contracts	1,815,285.87	1,764,873.24
Net balance credited or (charged) to municipalities under cost contracts	6,580.90	(16,098.49)

REVENUE OF COMMISSION

The revenue of the Commission at interim rates from the municipal utilities operating under cost contracts, from customers in rural power districts and from other customers with whom—on behalf of the municipalities—the Commission has special contracts, all within the Niagara, Georgian Bay, Eastern Ontario and Thunder Bay systems, Manitoulin Island and Nipissing rural power districts aggregates $30,620,707.51. The revenue of the Commission from customers served by the Northern Ontario Properties, which are held and operated in trust for the Province, is $3,402,958.84, making a total of $34,023,666.35.

Summarized operating results of these systems and rural power districts and of the Northern Ontario Properties, follow:

SUMMARIZED OPERATING RESULTS
OF THE
NIAGARA, EASTERN ONTARIO, GEORGIAN BAY, THUNDER BAY SYSTEMS
AND ALSO
NIPISSING AND MANITOULIN RURAL POWER DISTRICTS

Revenue; amount received from or billed against municipalities and other customers		$27,072,808.10	
Revenue from customers in rural power districts		3,547,899.41	
Total revenue, systems and rural			$30,620,707.51
Operation, maintenance, administration, interest and other current expenses		$24,765,730.53	
Provision for reserves—			
Depreciation and obsolescence	$2,116,095.55		
Contingencies	786,170.37		
Stabilization of rates	168,142.70		
Sinking fund	2,814,737.24		
		5,885,145.86	
			$30,650,876.39
Net balance			$ 30,168.88

SUMMARIZED OPERATING RESULTS
OF THE
NORTHERN ONTARIO PROPERTIES

Held and operated by The Hydro-Electric Power Commission of Ontario
in trust for the Province of Ontario

Revenue; amount received from or billed against municipalities and other customers			$ 3,402,958.84
Operation, maintenance, administration, interest and other current expenses		$ 1,948,978.63	
Provision for reserves—			
Depreciation and obsolescence	$ 307,021.57		
Contingencies	76,101.45		
Sinking fund	962,438.79		
		1,345,561.81	
			3,294,540.44
Balance			$ 108,418.40

MUNICIPAL ELECTRIC UTILITIES

The following is a summation of the year's operation of the local electric utilities conducted by municipalities receiving power under cost contracts with the Commission:

Total revenue collected by the municipal electric utilities		$33,981,832.73
Cost of power	$20,575,457.95	
Operation, maintenance and administration	5,842,714.89	
Interest	1,642,663.25	
Sinking fund and principal payments on debentures	2,424,098.70	
Depreciation and other reserves	2,451,529.46	
Total		32,936,464.25
Surplus		1,045,368.48

With regard to the local Hydro utilities operating under cost contracts, the following statements summarize for each of the four co-operative systems administered by the Commission, the financial status and the year's operations as detailed in Section X of the Report.

NIAGARA SYSTEM

The total plant assets of the Niagara system utilities amount to $83,001,844.87. The total assets, including an equity in the H-E.P.C. of $38,546,153.06 aggregate $141,134,310.55. The reserves and surplus accumulated in connection with the local utilities, exclusive of the equity in the H-E.P.C., amount to $69,341,857.12, an increase of $4,235,812.60 during the year 1938. The percentage of net debt to total assets is 24.4, a reduction of 2.9 per cent.

The total revenue of the municipal electric utilities served by this system was $27,567,836.78, a decrease of $87,388.18, as compared with the previous year. After meeting all expenses in respect of operation, including interest, setting up the standard depreciation reserve amounting to $2,003,615.43 and providing $2,242,798.84 for the retirement of instalment and sinking fund debentures, the total net surplus for the year for the municipal electric utilities served by the Niagara system amounted to $655,157.82, as compared with $998,132.08 the previous year.

GEORGIAN BAY SYSTEM

The total plant assets of the Georgian Bay system utilities amount to $2,907,381.17. The total assets, including an equity in the H-E.P.C. of $1,421,198.47 aggregate $4,951,555.31. The reserves and surplus accumulated in connection with the local utilities, exclusive of the equity in H-E.P.C., amount to $3,087,587.69, an increase of $140,669.80 during the year 1938. The percentage of the net debt to total assets is 12.3, a reduction of 1.6 per cent.

The total revenue of the municipal electric utilities served by this system was $1,240,089.71, an increase of $25,202.30 as compared with the previous year. After meeting all expenses in respect of operation, including interest, setting up the standard depreciation reserve amounting to $87,698.08 and providing $47,943.38 for the retirement of instalment and sinking fund debentures, the total net surplus for the year for the municipal electric utilities served by the Georgian Bay system amounted to $75,450.57 as compared with $48,756.13 the previous year.

EASTERN ONTARIO SYSTEM

The total plant assets of the Eastern Ontario system utilities amount to $8,789,985.03. The total assets, including an equity in the H-E.P.C. of $1,956,360.34, aggregate $13,180,818.72. The reserves and surplus accumulated in connection with the local utilities, exclusive of the equity in H-E.P.C., amount to $9,102,617.17, an increase of $571,908.72 during the year 1938. The percentage of net debt to total assets is 12.3, a reduction of 1.7 per cent.

The total revenue of the municipal electric utilities served by this system was $3,536,559.56, a decrease of $28,937.31 as compared with the previous year. After meeting all expenses in respect of operation, including interest, setting up the standard depreciation reserve amounting to $226,373.00 and providing $106,983.15 for the retirement of instalment and sinking fund debentures, the total net surplus for the year for the municipal electric utilities served by the Eastern Ontario system amounted to $243,365.46 as compared with $290,449.54 the previous year.

THUNDER BAY SYSTEM

The total plant assets of the Thunder Bay system utilities amount to $2,726,465.75. The total assets, including an equity in the H-E.P.C. of $2,330,406.77, aggregate $6,220,833.02. The reserves and surplus accumulated in connection with the local utilities, exclusive of the equity in H-E.P.C., amount to $3,350,233.84 a decrease of $17,248.22 during the year 1938. The percentage of net debt to total assets is 9.5, an increase of 0.1 per cent.

The total revenue of the municipal electric utilities served by this system was $1,179,175.59, a decrease of $136,755.81 as compared with the previous year. After meeting all expenses in respect of operation, including interest, setting up the standard depreciation reserve amounting to $43,891.34 and providing $11,093.64 for the retirement of instalment and sinking fund debentures, the total net loss for the year for the municipal electric utilities served by the Thunder Bay system amounted to $16,900.17, as compared with a net surplus of $64,835.16 for the previous year.

* * *

In concluding this survey and summary of the year's operations my colleagues, Hon. Wm. L. Houck and Mr. J. Albert Smith, join with me in acknowledging the efficient and faithful service rendered by the staff.

During the year it has been my privilege to meet in friendly consultation many of those entrusted by the various municipalities with the direction of their local Hydro utilities, and to speak to representative Hydro gatherings in each of the co-operative systems. I wish to express the sincere thanks of my colleagues and myself for the kindly welcome given to us in the various communities visited, and for the helpful spirit of co-operation everywhere shown. And to the Press of the Province I desire to say that we are grateful for its continued service and support.

Respectfully submitted,

T. H. HOGG,

Chairman

Toronto, Ontario, March 31st, 1939

T. H. Hogg, Esq., B.A.Sc., C.E., D.Eng.,

Chairman, The Hydro-Electric Power Commission of Ontario,
Toronto, Ontario.

Sir,—I have the honour to submit, herewith, the Thirty-first Annual Report of The Hydro-Electric Power Commission of Ontario for the fiscal year which ended October 31, 1938. This report covers the operations of the Commission with regard to the supply of power to, or on behalf of, the partner Municipalities of the several Co-operative Systems, as well as the administration of the Northern Ontario Properties, which are held and operated by the Commission in trust for the Province of Ontario.

I have the honour to be, Sir,

Your obedient servant,

Osborne Mitchell,

Secretary

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Transmission Lines and Stations of the Northern Ontario Properties At end of volume

THIRTY-FIRST ANNUAL REPORT

OF

The Hydro-Electric Power Commission of Ontario

FOREWORD

and

Guide to the Report

THE Hydro-Electric Power Commission of Ontario administers a co-operative municipal-ownership enterprise, supplying power throughout the Province of Ontario. The Commission was created in 1906 by special act of the Legislature and followed investigations by advisory commissions appointed as a result of public agitation to prevent monopoly and to provide a more satisfactory supply of low-cost power in Southern Ontario. In 1907 The Power Commission Act (7-Edward VII Ch. 19) was passed amplifying and extending the Act of 1906 and this Act—modified by numerous amending acts which now form part of the Revised Statutes of Ontario, 1937, Chap. 62—constitutes the authority under which the Commission operates.

The Hydro-Electric Power Commission of Ontario consists of a Chairman and two Commissioners, all of whom are appointed by the Lieutenant-Governor-in-Council to hold office during pleasure. One of the Commissioners must be a member of the Executive Council and two may be members.

In 1909, work was commenced on a comprehensive transmission system and by the end of 1910 power was being supplied to several municipalities.

The Commission has now been supplying electrical energy for more than twenty-eight years and the Report contains diagrams depicting the growth of the enterprise. During this period the costs of electricity to the consumer have been substantially reduced and the finances of the enterprise have been established on a secure foundation.

At the end of 1938 the Commission was serving 821 municipalities in Ontario. This number included 26 cities, 102 towns, 285 villages and police villages and 408 townships. With the exception of 14 suburban sections of townships known as "voted areas", the townships and 102 of the smaller villages are served as parts of 178 rural power districts.

Financial Features of Co-operative Systems

The basic principle governing the financial operations of the undertaking is, that electrical service be given by the Commission to the municipalities and by the municipalities to the ultimate consumers at cost. Cost includes not only all operating and maintenance charges, interest on capital investment and reserves for renewals or depreciation, for obsolescence and contingencies, and for stabilization of rates, but also a reserve for sinking fund or capital payments on debentures.

The undertaking from its inception has been entirely self-supporting and no contributions have been made from general taxes except in connection with service in rural power districts. In this case, the Province, in pursuance of its long established policy of assisting agriculture and with the approval of the urban citizens, assists extension of rural electrical service by a grant-in-aid of the capital cost and in other ways as specified and detailed in the Report.

As the principle of "service at cost" is radically different from that obtaining in private organizations, where profit is the governing feature, it naturally results in different and in some ways unique administrative features.

The undertaking as a whole involves two distinct phases of operations as follows:

The *First* phase of operations is the provision of the electrical power—either by generation or purchase—and its transformation, transmission and delivery in *wholesale* quantities to individual municipal utilities, to large industrial consumers, and to rural power districts. This phase of the operations is performed by The Hydro-Electric Power Commission of Ontario as trustee for the municipalities acting collectively in groups or "systems," and the financial statements relating to these collective activities of the municipalities are presented in Section IX of the Report. Each system of municipalities, as provided in *The Power Commission Act,* forms an independent financial unit and the accounts are therefore segregated and separately presented for each system. In order, however, that there may be a comprehensive presentation of the co-operative activities of the undertaking as a whole, there are presented, in addition, for the four main systems and miscellaneous co-operative activities, a balance sheet of assets and liabilities, a statement of cost distributions, a tabulation of fixed assets, and summary combined statements respecting the various reserves.

The *Second* phase of operations is the *retail* distribution of electrical energy to consumers within the limits of the areas served by the various municipal utilities and rural power districts. In the case of rural power districts, which usually embrace portions of more than one township, The Hydro-Electric Power Commission not only provides the power at wholesale, but also—on behalf of the respective individual townships—attends to all physical and financial operations connected with the distribution of energy at retail to the consumers within the rural power districts. Summary financial statements relating to the rural power districts are also presented in Section IX of the Report, and a general report on their operation is given in Section III.

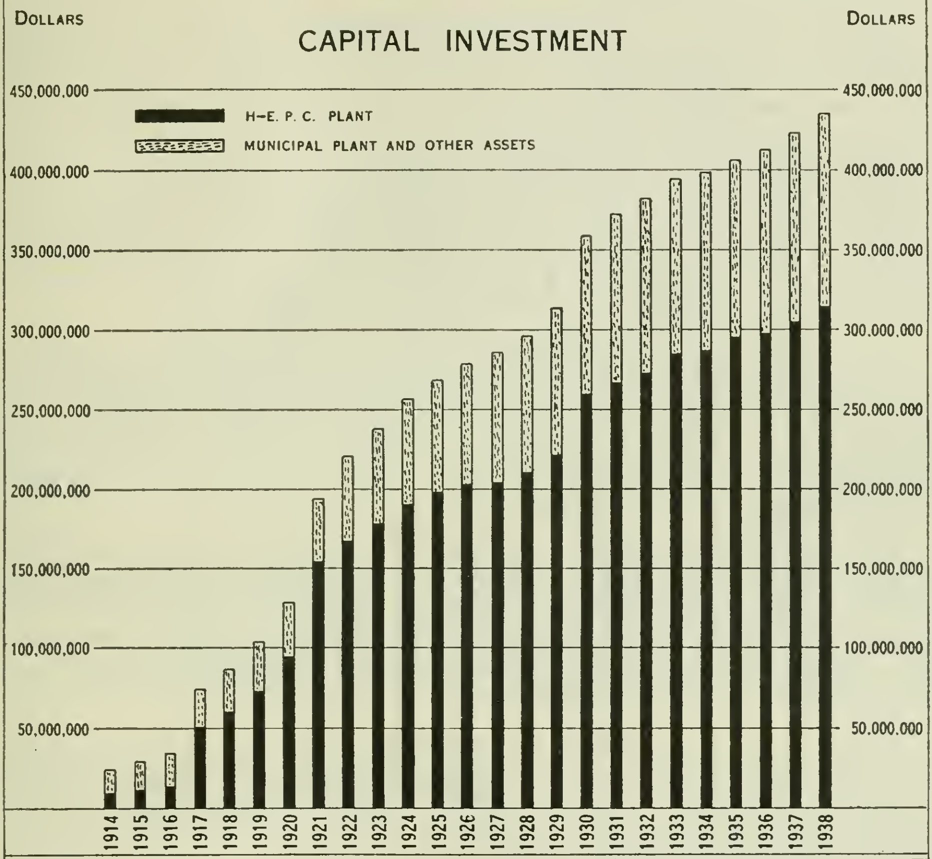
In the case of cities, towns, many villages and certain thickly populated areas of townships, retail distribution of electrical energy provided by the Commission is in general conducted by individual local municipal utility commissions under the general supervision of The Hydro-Electric Power Commission of Ontario. The balance sheets, operating reports and statistical data relating to the individual urban electrical utilities are presented in Section X of the Report.

For the Northern Ontario Properties held and operated by the Commission in trust for the Province there are also presented in Section IX financial statements including a balance sheet; an operating account, and statements respecting reserves and capital expenditures.

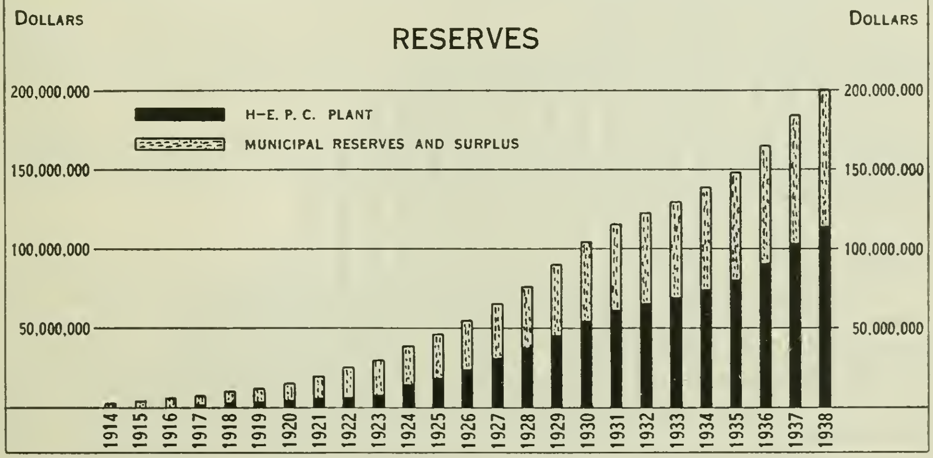
THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

TWENTY-FIVE YEARS RECORD — ALL SYSTEMS

CAPITAL INVESTMENT



RESERVES



Further details respecting administration, and explanations of the financial tables presented in the Report are given in the introductions to sections IX and X on pages 155 and 245.

Co-operative Systems Operating

From time to time in accordance with provisions in *The Power Commission Act* various groups of municipalities have been co-ordinated to form systems for the purpose of obtaining power supplies from convenient sources. In some cases these small systems grew until their transmission lines interlocked with those of adjacent systems and it proved beneficial to consolidate the transmission networks and the financial and administrative features. In the well settled parts of the Province, known as Old Ontario, this process has now reached a more stable condition and the municipalities of the southern part of the Province are now combined in three systems: the Niagara system, the Georgian Bay system and the Eastern Ontario system. One other system of partnership municipalities is known as the Thunder Bay system.

The Niagara System is the largest and most important system. It embraces municipalities in all the territory between Niagara Falls, Hamilton and Toronto on the east and Windsor, Sarnia and Goderich on the west. It is served with electrical energy generated at plants on the Niagara river, supplemented with power transmitted from generating plants on the Ottawa river and with power purchased from Quebec companies.

The Georgian Bay System comprises municipalities in that part of the Province which surrounds the southern end of Georgian Bay and lies to the north of the territory served by the Niagara system. It includes the districts surrounding lake Simcoe and extends as far north as Huntsville in the Lake of Bays district and south to Port Perry. Its power supplies are derived chiefly from local water power developments.

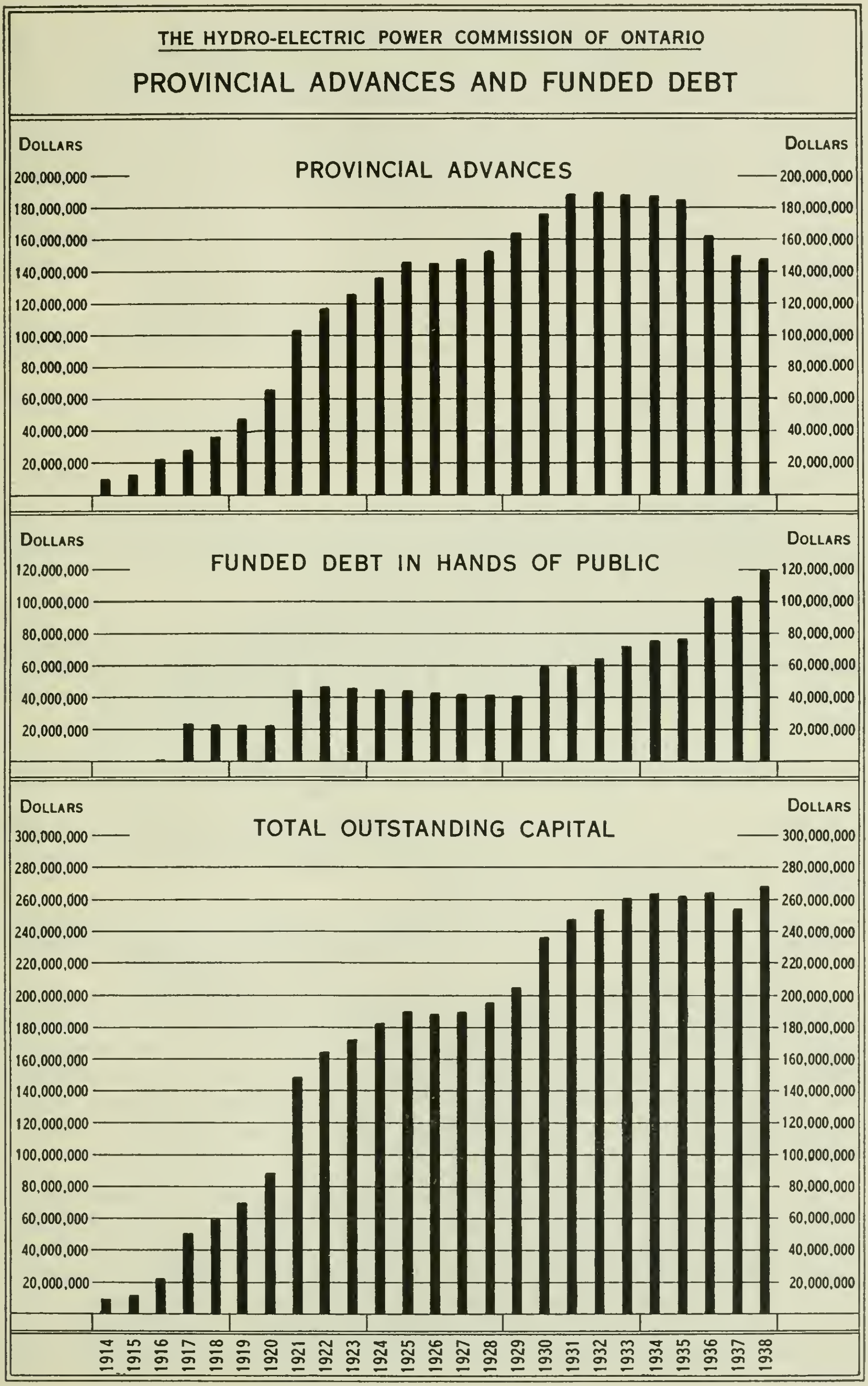
The Eastern Ontario System serves all of Ontario east of the areas comprising the Georgian Bay and the Niagara systems. It includes the districts of Central Ontario, St. Lawrence, Rideau, Ottawa and Madawaska; formerly separate systems. Its power supplies are from local developments supplemented by purchases from other sources.

The Thunder Bay System comprises the cities of Port Arthur and Fort William, adjacent rural sections, the village of Nipigon, and the mining district of Longlac. Two developments on the Nipigon river supply power.

A small rural district known as *Manitoulin Rural Power District* on Manitoulin island in the northern area of lake Huron is served by the Commission as an independent unit.

Northern Ontario Properties

In addition to its operations on behalf of the partner municipalities, the Commission, under an agreement with the Province, holds and operates the Northern Ontario Properties in trust for the Province. For the purposes of financial administration these properties are treated as one unit. The Northern Ontario Properties lie in the portion of the Province north of Lake Nipissing and French River areas, exclusive of the territory served by the Thunder Bay system. The principal areas in this vast territory at present receiving service are


THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
PROVINCIAL ADVANCES AND FUNDED DEBT
PROVINCIAL ADVANCES
DOLLARS
200,000,000
180,000,000
160,000,000
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
FUNDED DEBT IN HANDS OF PUBLIC
DOLLARS
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
20,000,000
TOTAL OUTSTANDING CAPITAL
DOLLARS
300,000,000
280,000,000
260,000,000
240,000,000
220,000,000
200,000,000
180,000,000
160,000,000
140,000,000
120,000,000
100,000,000
80,000,000
60,000,000
40,000,000
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the *Nipissing District* centering around the city of North Bay on the shore of lake Nipissing; the *Sudbury District* comprising the city of Sudbury and the adjacent mining area known as Sudbury Basin; the *Abitibi District* comprising the territory served by 25-cycle power from the Abitibi Canyon development, together with a small area in the southern portion of the district of Sudbury in which mining properties are served with 60-cycle power; the *Patricia District* comprising the territory within transmission distance of the Ear Falls development at the outlet of Lac Seul on the English river including the Red Lake mining area, and *St. Joseph District* comprising the territory immediately north of lake St. Joseph in the territorial district of Patricia served with power from a development at Rat Rapids on the Albany river.

The geographic boundaries of the various systems are shown on the map of transmission lines and stations at the back of the Report.

The power supplies for the systems and Northern Ontario districts are listed in the first table of Section II of the Report on pages 8 and 9.

The Annual Report

The table of contents, pages xxiii and xxiv lists the matters dealt with in the Report. At the end of the Report there is a comprehensive index. To those not conversant with the Commission's Reports, the following notes will be useful.

In Section II, pages 6 to 58, dealing with the operations of the systems, are a number of diagrams showing graphically the monthly loads on the several systems and districts. Tables are also presented showing the amounts of power taken by the various municipalities during the past two years.

The rural distribution work of the Commission has proved of widespread interest and special reference to this is made in Section III on pages 67 to 89.

In Sections IV, V and VI will be found information respecting progress of work on new power developments and on transmission system extensions, together with photographic illustrations.

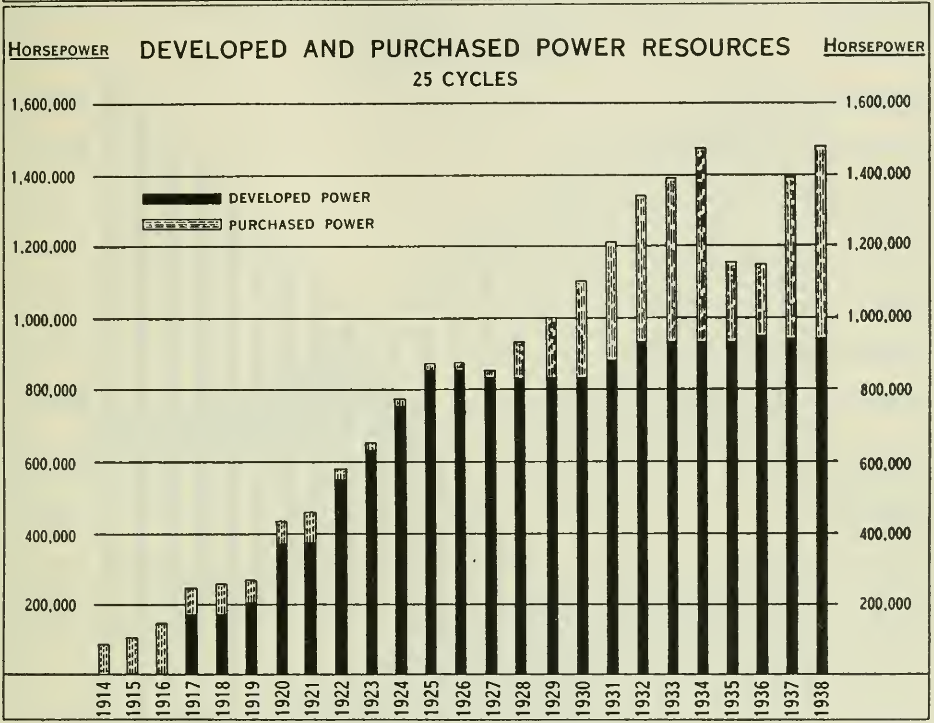
About one-half of the Report is devoted to financial and other statistical data which are presented in two sections IX and X already referred to above.

Frequent enquiries for the rates for service to consumers are received by the Commission. For the urban municipalities served by the Commission these are given in statement "E" starting on page 396. For the rural power districts they are given in a table starting on page 82. Certain statistical data resulting from the application of the rates in urban utilities are given in statement "D". This statement is prefaced by a special introduction starting on page 378.

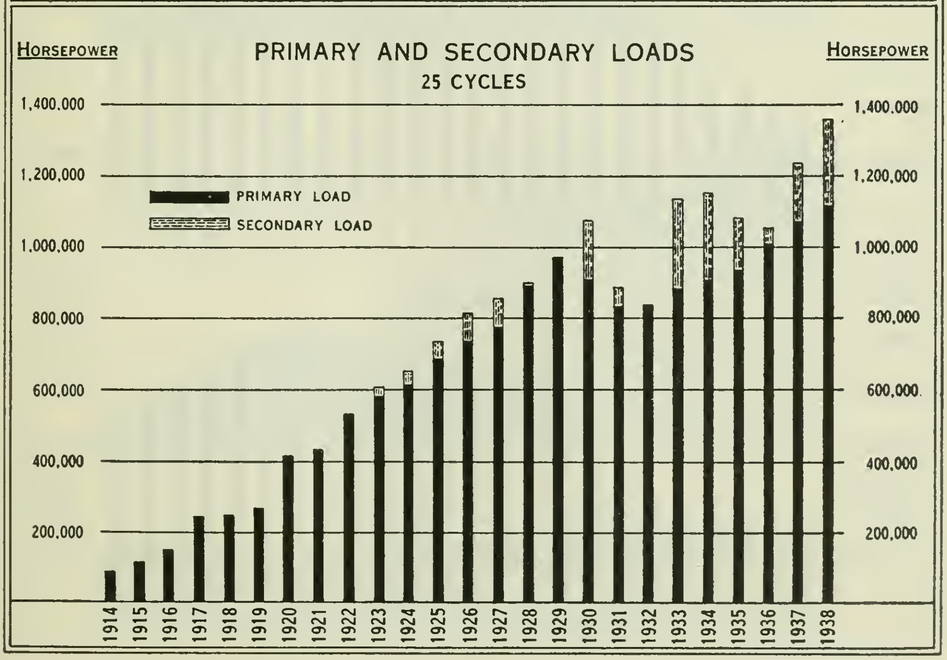
In its Annual Reports the Commission aims to present a comprehensive statement respecting the activities of the whole undertaking under its administration. Explanatory statements are suitably placed throughout the Report. The Commission receives many letters asking for general information respecting its activities, as well as requests for specific information concerning certain phases of its operations. In most cases these enquiries can satisfactorily be answered by simply directing attention to information presented in the Annual Report.

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

TWENTY-FIVE YEARS RECORD—NIAGARA SYSTEM



DEVELOPED AND PURCHASED POWER RESOURCES
25 CYCLES

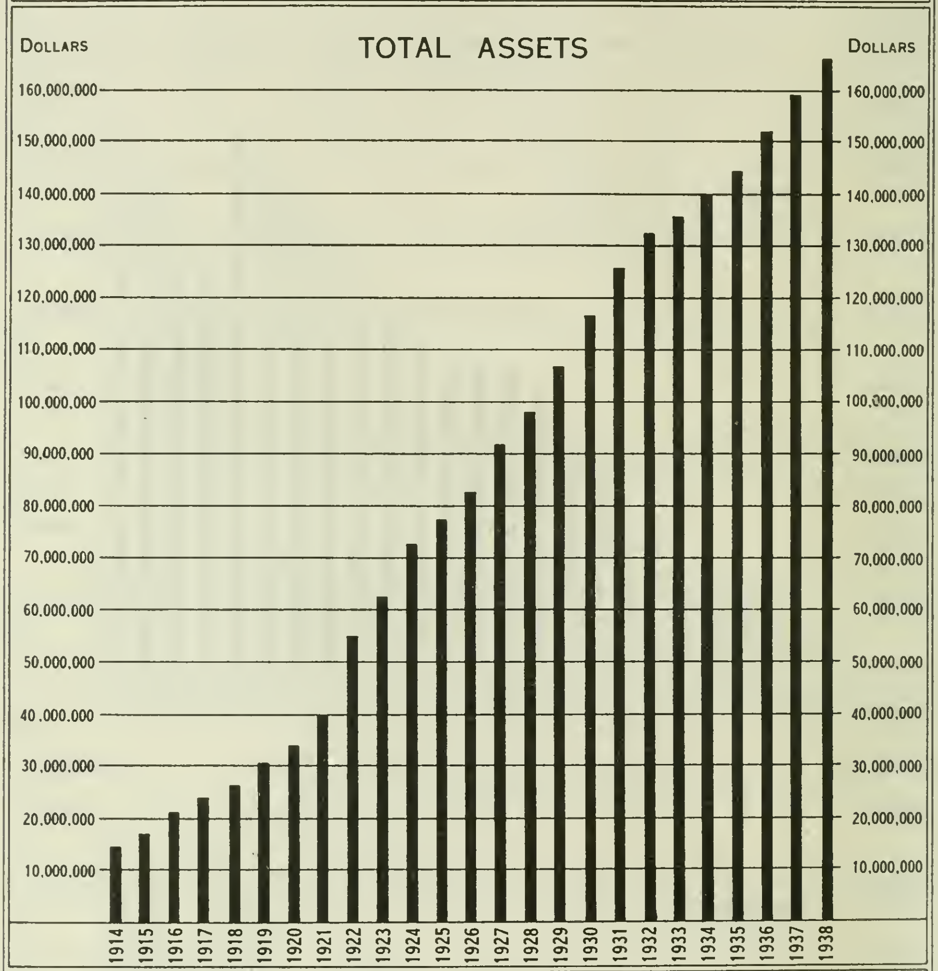


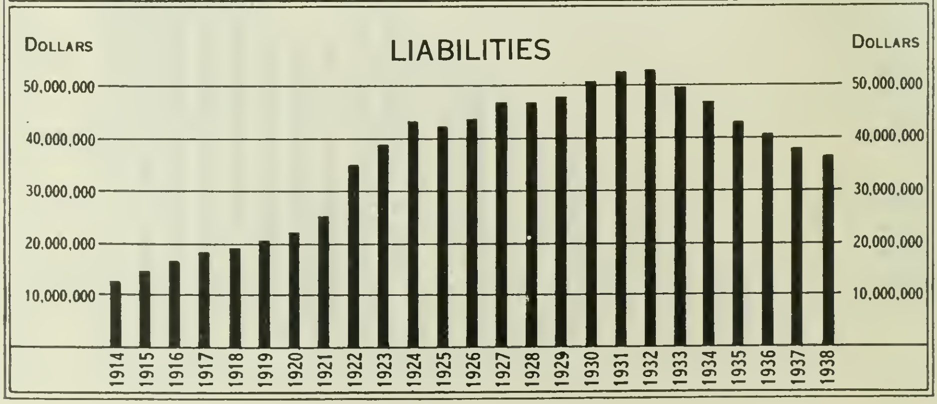
PRIMARY AND SECONDARY LOADS
25 CYCLES

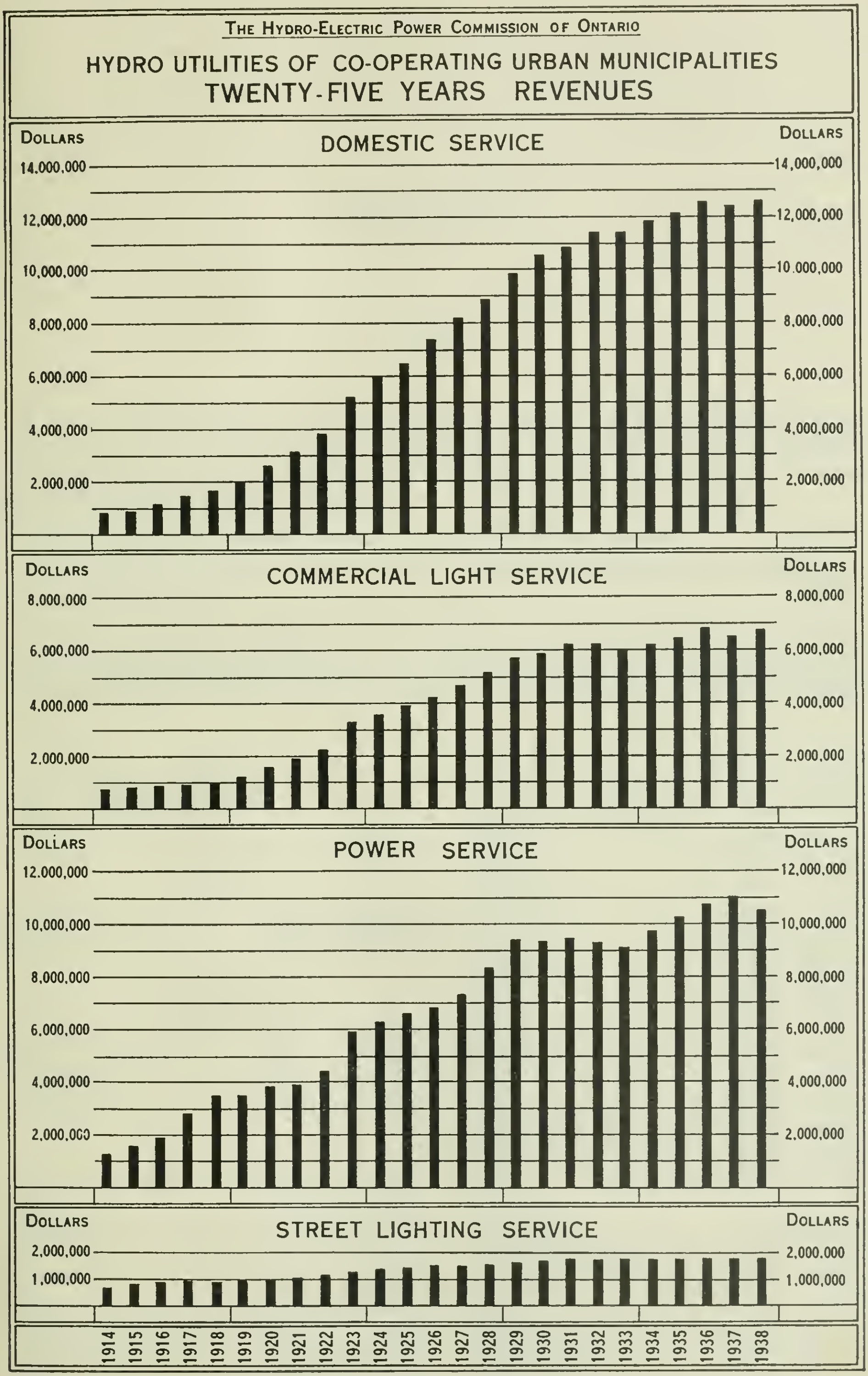
THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

HYDRO UTILITIES OF CO-OPERATING URBAN MUNICIPALITIES

TWENTY-FIVE YEARS RECORD






The Hydro-Electric Power Commission of Ontario
HYDRO UTILITIES OF CO-OPERATING URBAN MUNICIPALITIES
TWENTY-FIVE YEARS REVENUES
DOMESTIC SERVICE
Dollars
14,000,000
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6,000,000
4,000,000
2,000,000
COMMERCIAL LIGHT SERVICE
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6,000,000
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POWER SERVICE
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
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SECTION I

LEGAL

At the 1938 Session of the Legislative Assembly of the Province of Ontario two Acts respecting The Hydro-Electric Power Commission of Ontario were passed. They are reproduced in full in Appendix I of this Report. The short titles of the said Acts are as follows:

The Power Contracts Validation Act, 1938, Chapter 27.
The Rural Power District Service Charge Amendment Act, 1938, Chapter 33.

The agreements between The Hydro-Electric Power Commission of Ontario and municipalities and corporations mentioned in the list hereunder given were approved by Order-in-Council, dated the 7th day of March, 1939.

CITIES	
City of Kingston and The Public Utilities Commission of the City of Kingston	Nov. 1, 1937
TOWNS	
Geraldton	Nov. 29, 1937
Kearney	June 7, 1938
VILLAGES	
Beamsville	Oct. 30, 1937
Delhi	Feb. 7, 1938
Morrisburg	Jan. 14, 1938
Newcastle	Feb. 9, 1937
TOWNSHIPS	
Alice and Fraser	Sept. 24, 1938
Amherst Island	Jan. 10, 1938
Assiginack	June 27, 1938
Athol	Mar. 2, 1938
Bayham	Sept. 7, 1937
Binbrook	Oct. 14, 1938
Bromley	Dec. 6, 1937
Collingwood	Dec. 3, 1937
Cramahe	Aug. 26, 1938
Dysart	Oct. 3, 1938
Elderslie	Aug. 10, 1938
Elzevir and Grimsthorpe	Aug. 29, 1938
Ennismore	Mar. 26, 1938
Foley	Oct. 1, 1938
Glanford	Oct. 22, 1937
Howe Island	Dec. 15, 1937
Kennebec	Sept. 12, 1938
Lanark	Aug. 27, 1938
Madoc	May 30, 1938
Mara	May 26, 1938
Nichol	Nov. 15, 1937
Nipigon	May 26, 1938
Oakley	Sept. 24, 1938
Olden	Feb. 5, 1938
Palmerston and Canonto	Oct. 12, 1937
Petawawa	Aug. 20, 1938
Ross	Dec. 27, 1937
Sandfield	June 30, 1938
Sherbrooke	April 18, 1938
South Marysburgh	Aug. 17, 1937
Stanhope	July 6, 1938
Tay	Mar. 15, 1937
Tehkummah	July 5, 1938
Westminster	Mar. 19, 1938
Wolfe Island	Jan. 25, 1938

Corporations

Canadian Atlas Steels, Limited	Nov. 18, 1937
Canadian Gypsum Company, Limited	Jan. , 1937
Canadian Steel Corporation, Limited	Mar. 1, 1938
The Exolon Company Incorporated	Nov. 1, 1937
Magnet Consolidated Mines (1936) Limited	Mar. 24, 1938
The National Steel Car Corporation Limited	June 10, 1938
Non-Skid Pavement Limited	July 27, 1938
Norton Company	Sept. 1, 1938
Phillips Electrical Works Limited	June 1, 1937

RIGHT-OF-WAY AND PROPERTY

The Commission as trustee for the co-operating municipalities of the several systems, and as trustee for the Provincial Government in Northern Ontario has vested in it, or controls through ownership of subsidiary companies, a large amount of real estate throughout the Province. This real estate comprises power sites, storage basins, land held to avoid consequential damages, right-of-way and lands occupied by generating stations, transformer and distributing stations, and administration buildings. In respect to the 6,200 miles of high-voltage transmission lines, and the 15,000 miles of distribution lines in rural power districts, the Commission's rights vary widely and include rights derived from direct ownership of right-of-way, rights held through easements, and licenses of occupation with the privilege to overhang or tree trim thereon.

The Commission, where vested in the fee, endeavours to obtain from the lands under its jurisdiction the maximum revenue consistent with its own beneficial use. Lands which have come into the Commission's possession, and which are not immediately required for its purposes are, where possible, leased until the need arises for their use, and an endeavour is made to dispose of all lands not required.

The acquirement and administration of land owned, leased or controlled involves surveys, investigation of title, registrations, record, assessment and taxes.

In connection with the transmission and distribution networks throughout the Province, it is frequently necessary to obtain the approval of such controlling bodies as the Board of Transport Commissioners for Canada, Ontario Municipal Board, Department of Transport, Department of Public Works, Department of Indian Affairs, Department of Crown Lands or other corporate body having jurisdiction over the lands involved.

The Year's Operations

Acquisitions of property by the Commission were greatly increased during the past year, owing to the construction of several important tie-lines. Requirements for right-of-way in connection with distribution lines resulted in an increase of 100 per cent in the number of pole line easements taken.

Power Development Lands

Claims respecting a number of properties abutting Chats lake on the Ontario side were settled.

In connection with the new power development for the Georgian Bay system a large area of land adjoining Ragged Rapids was acquired from private owners for the erection of the dams, power house, operator's cottage, and other associated structures. In the immediate vicinity of the development, and adjacent to the junction of the Musquash and Moon rivers, rights were obtained to flood land up to the higher water level that would result from the operation of the dam. Arrangements were made with the Canadian Pacific Railway for a temporary private siding at Bala for construction purposes.

At Eugenia Falls development additional property was acquired for the extension of the present site occupied by operators' dwellings.

By agreement with the Canadian National Railways a temporary siding adjoining Coniston generating station was made for the purpose of handling materials in the re-construction of the dam.

Many properties were affected by the construction of the reservoir at Frederick House and Night Hawk lakes in connection with the Abitibi Canyon development. Claims with respect to these were settled.

Transmission and Distribution Lines

The construction of several important transmission lines, and a greatly increased mileage of rural distribution lines involved an unusually large amount of property negotiation by purchase, lease or easement. Easements totalling 3,346 were secured together with 642 crossing agreements and 346 tree trimming rights. Settlements were arranged in 250 damage claims.

An important agreement was made with the Corporation of the City of Toronto for the occupation of municipally-owned lands in connection with the new 110,000-volt, double-circuit steel tie-line between Leaside and Toronto-Strachan transformer stations, which was erected in 1938 and provides the Commission with an important eastern entrance for its power supplies into the city of Toronto. A term agreement was also entered into with the Canadian National Railways, the Canadian Pacific Railway Company, and the Toronto Terminals Railway for the occupation of railway properties in connection with the construction and maintenance of this line.

An important property immediately west of the Humber river was acquired to complete the final link of the right-of-way between York and Toronto Strachan transformer stations.

Other transmission lines of importance in connection with which various rights were acquired are as follows:

Niagara system—Toronto Power transformer station to Niagara transformer station, Mount Joy distributing station to Green River distributing station, St. Thomas transformer station to Yarmouth junction, Yarmouth junction to St. Thomas Provincial Hospital distributing station, Bloomsburg junction to Delhi distributing station, Brampton to Brampton distributing station and Weston junction to National Steel Car Corporation.

Georgian Bay System—Big Chute generating station to Matchedash junction.

Eastern Ontario System—Sills Island generating station to Trenton transformer station, Auburn switching station to Cavan junction, Perth Road junction to York Road junction and Plat junction to Morrisburg distributing station.

Northern Ontario Properties—Patrolman's cottage sites at Island Falls, Hunta and Matachewan.

A large number of easements for pole rights were taken for the first time in the extension of rural lines on Manitoulin island and the North Bay rural power district.

In the many negotiations conducted, only two owners appealed to the valuator, appointed under The Power Commission Act.

Station Sites

Distribution station sites were purchased for an extension to Pinedale, and for new stations at Ilderton, Green River, Mount Pleasant, Malton, Delhi, Galt, Port Carling, Kilsyth, Consecon, and Geraldton.

Service and Office Buildings

A property was acquired in Toronto on Bloor street west in the vicinity of Sterling road for a construction service building. A tri-partite agreement was entered into covering a siding which will provide railway service into the premises.

A large number of leases were entered into throughout the Province to provide office space and storage facilities for the operation of rural district and inspection offices.

Sales and Leases

As in the previous year the policy of disposing of excess lands was continued and a number of properties in this category were sold, the most important being the former steam plant on Guise street, Hamilton.

Lands owned by the Commission in connection with power developments and also lands comprising the several hundreds of miles of owned right-of-way, not wholly occupied by the Commission's equipment, were leased wherever possible with the dual object of obtaining increased revenue and decreasing maintenance costs. Practically all of the residences owned by the Commission were occupied under lease. The number of income bearing leases approximates 1,500 and the annual revenue is about $90,000.

Residences and other buildings in urban and rural districts, chiefly in the Toronto and Niagara areas, were maintained in good condition and in many cases were rehabilitated and improved in order to meet modern requirements and produce increased revenue.

Surveys

A large number of surveys of lands owned, and some of properties being acquired, were made. Specifications respecting a number of canal and river crossings were completed for Government approval.

In practically all cases where surveys of lands held in fee were made, standard H.E.P.C. monuments were placed to mark the boundaries; some 350 monuments were placed.

In the case of sales to adjacent owners of former Toronto Suburban Railway right-of-way upon which transmission line rights have been retained, monuments were placed to establish property lines. The balance of this right-of-way, transferred to the Department of Highways, will be marked by that Department.

The more important field surveys made were in connection with the following properties:

Generating Stations and Sites: Wasdell Falls, Ragged Rapids, Operator's Residence at Eugenia, Lakefield, Young's Point, Burleigh Falls, Frankford, Campbellford and Calabogie.

Transformer and Distribution Stations: Brampton, Perch, Wellesley, Galt, Hamilton Gage, Delhi, Mount Pleasant, Malton Air Port, Green River, Port Carling, Priceville, Kilsyth, Belleville, Consecon, Renfrew, Sturgeon Falls, Treadwell, Timmins, Vimy Gold Mine, Kirkland Lake and North Bay (3 sites).

Transmission Lines: Leaside to Strachan Ave. (N. 34x3); Trent Canal overhead crossing at Heely Falls; Timmins distributing station southerly 2.5 miles (F.A. 19x25); Rochester Heights, Timmins (F.A. 72x19); Smokey Falls Station to Crystal Falls (F.Z. 57x73).

Submarine Cable Crossings: Sparrow Lake, Amherst Island, Wolfe Island, Chemong Lake, Gannons Narrows, Howe Island and Rideau Lake.

Construction Service Building: Bloor St., Toronto (K. 17).

Miscellaneous: Properties at Niagara Falls, Sunnyside Toronto and Stamford Township; Waterdown transmission line boundaries, Severn Falls C.P.R. road crossing, Clear Lake Dam (damage claim), Braie Lake (damage claim), Base Line at Coniston and Patrolman's residence at Warren.

Records

The following is a brief statistical summary of the records made:

	Number
1. Current deeds, including plans attached, copied and recorded	104
2. Plans and descriptions prepared for deed of land and easements for transmission lines and all other developments:	
(a) Purchase of land	63
(b) Easements and leases	245
3. The following were indexed:	
Deeds of land	189
Tree trimming rights (copies supplied Operating dept.)	582
Transmission line easements	960

Taxes

Assessments and corresponding taxes covering Commission owned properties were received from 251 municipalities. Where assessments were not in conformity with the provisions of The Power Commission Act, appeals were made, resulting generally in a reduction of assessment and taxes.

SECTION II

OPERATION OF THE SYSTEMS

OPERATION of the plants on the Niagara river was severely affected by an unprecedented ice jam in the river which flooded the Ontario Power plant in January and disabled it for months, while at the same time the output of other Niagara river generating stations was curtailed so that the maximum simultaneous loss to the Commission in generating capacity on the Niagara system approximated 255,000 horse-power. Ample reserve capacity, however, enabled all primary power demands to be met and no customer suffered any reduction in primary load.

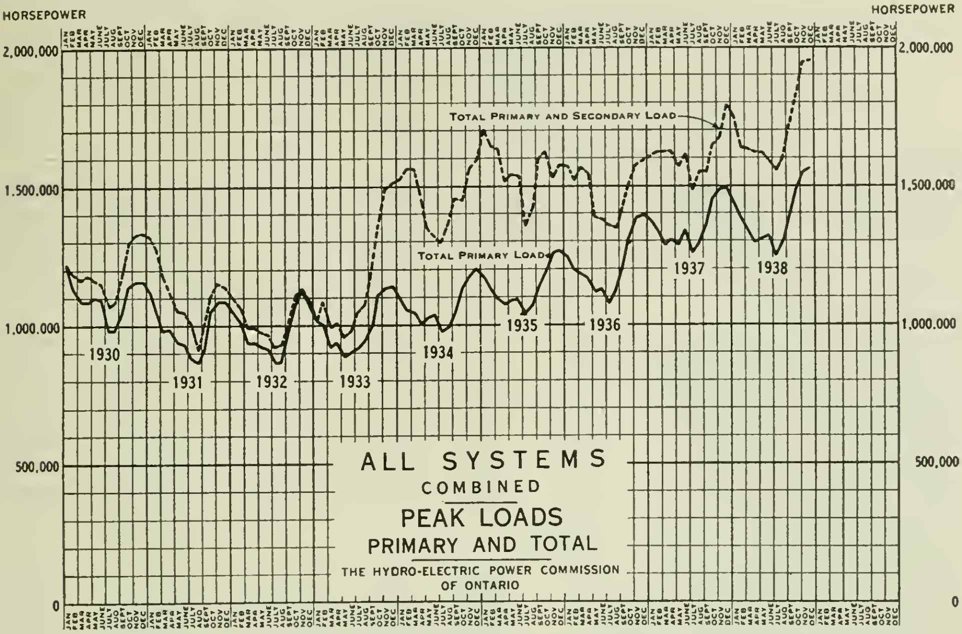
There were no serious interruptions to service on any part of the Commission's undertakings.

Rainfall, which was considerably above normal during July, August and September, increased the stream flow in the Trent river and it was possible to operate the generating stations in the Trent valley at somewhat higher load factors than is usual during these months. On the Georgian Bay system, stream flow conditions were better than in the previous year. This resulted in an increased output of the generating stations on this system which was more than sufficient to meet the additional energy demand over the previous year and consequently less energy was required from the Niagara system. Normal conditions prevailed on other systems except on the Nipissing district where water conditions were below normal.

Load Conditions

The total energy supplied to all systems, both generated and purchased, amounted to 7,582,072,573 kilowatt-hours or 2.2 per cent below last year. The yearly peak load (i.e. the sum of the peak loads of all systems) was 1,851,618 horsepower, the largest ever carried and 9.3 per cent in excess of last year's peak. Larger sales of secondary power towards the close of the year resulted in higher total peaks but had comparatively little effect on the average load for the year.

The primary load has the greatest significance in relation to revenue and general industrial conditions and is distinguished from the total load in that it excludes secondary power supplied only as and when available. The aggregate energy supplied for primary load to all systems amounted to 6,124,187,686 kilowatt-hours, showing a slight increase of 0.2 per cent over the previous year.



The primary peak load (i.e. the sum of all system primary peak loads) was 1,533,174 horsepower, an increase of 65,000 horsepower or 4.4 per cent over the previous year. Both primary peak and average load were greater than in any previous year.

Although the year's increase in energy for primary consumption was insignificant, a survey of the monthly peak loads through the year as shown by the accompanying graph gives a more encouraging picture, especially at the close of the year. In the spring and summer months the primary load receded to levels below those of the like period of the previous year, apparently due to an industrial recession. By fall there was an improvement in load conditions which continued to gain ground through November and December, 1938, the December primary peak load being 5 per cent greater than that of December, 1937.

Details regarding the amount of power generated and purchased and the loads of each system are given in the following sections of this report and in the load curves shown in connection with each system.

Municipal Load Trends

Tables are given in this section showing the peak loads of the various municipalities. This year a change has been made in the form of these tables in order to portray better the load trend. In previous reports only the October peak loads of the municipalities were shown. The reason for discontinuing the comparison of October peak loads is that they do not necessarily show the maximum load of the municipality for the year, and any unusual conditions during one month may destroy the value of the table as an indication of general load trend.

TOTAL POWER GENERATED

HYDRO-ELECTRIC GENERATING PLANTS

Generating plants	Maximum normal plant capacity Oct. 31, 1938 horsepower	Peak load during fiscal year		Total output during fiscal year	
		1936-37 horse-power	1937-38 horse-power	1936-37 kilowatt-hours	1937-38 kilowatt-hours
Niagara system					
Queenston-Chippawa—Niagara river	500,000	500,000	497,319	2,696,986,000	2,326,916,000
"Ontario Power"—Niagara river	180,000	177,614	175,603	806,435,000	389,325,000
"Toronto Power"—Niagara river	150,000	145,442	148,794	234,310,000	405,610,000
Chats Falls (Ontario half)—Ottawa river	108,000	117,962	112,601	405,905,450	352,019,350
DeCew Falls—Welland canal	50,000	47,319	48,257	131,426,000	124,851,000
Steam Plant—Hamilton	24,000	10,724	1,609	—2,639,400	22,000
Georgian Bay system					
South Falls—South Muskoka river	5,600	5,563	5,831	22,916,040	27,688,320
Hanna Chute—South Muskoka river	1,600	1,743	1,609	7,082,400	8,241,600
Trethewey Falls—South Muskoka river	2,300	2,145	2,145	10,548,000	11,128,800
Ragged Rapids—Musquash river†	5,000	....	5,630	....	927,800
Bala No. 1 and 2—Muskoka river	600	590	603	3,110,920	3,136,760
Big Chute—Severn river	5,800	5,791	5,791	23,573,040	23,404,080
Wasdells Falls—Severn river	1,200	1,092	1,072	4,517,400	3,457,680
Eugenia Falls—Beaver river	7,800	7,466	7,547	14,782,000	15,086,000
Hanover—Saugeen river	400	422	409	450,720	511,296
Walkerton—Saugeen river	500	483	489	2,116,200	2,066,200
Eastern Ontario system					
Sidney—Dam No. 2—Trent river	4,500	5,228	5,228	19,996,500	22,146,600
Frankford—Dam No. 5—Trent river	3,500	3,887	3,861	15,896,450	18,593,700
Sills Island—Dam No. 6—Trent river	2,100	2,145	2,212	452,000	9,939,000
Meyersburg—Dam No. 8—Trent river	7,000	8,150	8,043	37,292,910	40,533,040
Hague's Reach—Dam No. 9—Trent river	4,500	4,826	5,295	23,177,190	24,152,800
Ranney Falls—Dam No. 10—Trent river	11,500	10,992	11,944	48,558,300	52,556,540
Seymour—Dam No. 11—Trent river	4,200	4,290	4,692	20,025,600	19,917,600
Heely Falls—Dam No. 14—Trent river	15,300	16,086	16,186	59,560,740	66,238,900
Auburn—Dam No. 18—Trent river	2,400	2,654	2,788	11,092,920	13,084,310
Douro—Lock No. 24—Otonabee river	900	1,072	1,072	1,017,000	1,043,400
Lakefield—Otonabee river	2,300	2,413	2,413	8,622,910	11,258,640
Young's Point—Otonabee river	500	576	603	416,950	118,650
Fenelon Falls—Dam 30—Sturgeon river	1,000	938	938	2,506,550	2,275,050
High Falls—Mississippi river	3,000	3,204	3,264	12,526,320	13,106,640
Carleton Place—Mississippi river	400	389	509	11,864	2,520
Calabogie—Madawaska river	5,400	6,099	5,932	20,572,830	19,620,070
Galetta—Mississippi river	1,100	1,233	1,253	2,640,000	2,491,800
Thunder Bay system					
Cameron Falls—Nipigon river	73,500	79,088	76,407	404,303,000	356,173,000
Alexander—Nipigon river	50,000	53,217	53,887	307,305,600	270,743,600
Northern Ontario properties					
Nipissing district					
Nipissing—South river	2,100	2,252	2,239	7,329,880	7,619,160
Bingham Chute—South river	1,200	1,330	1,314	3,636,480	3,738,560
Elliott Chute—South river	1,700	1,930	1,917	3,276,000	2,891,400
Sudbury district					
Coniston—Wanapitei river	5,900	5,764	5,630	25,193,990	20,605,300
McVittie—Wanapitei river	3,100	3,217	3,150	19,289,346	16,082,250
Stinson—Wanapitei river	7,500	7,641	7,399	24,768,404	21,492,000
Crystal Falls—Sturgeon river	10,000	2,413	6,971	151,800	17,326,170
Patricia district					
Ear Falls—English river	9,000	5,013	5,965	22,504,740	27,910,900
Abitibi district					
Abitibi Canyon—Abitibi river	240,000	161,796	172,252	761,051,900	696,148,500
St. Joseph district					
Rat Rapids—Albany river	3,000	2,969	3,097	12,360,060	14,955,780
Total generated	1,519,400	*	*	6,237,058,004	5,467,157,766

*Because the peak loads on the various generating plants and purchased power sources usually occur at different times, the sum of the individual peak loads would not represent the sum of the peak loads on the systems. These, in the case of each system, must relate to the maximum load occurring at any one time. Consequently, the column headed "Peak load" is not totalled.

†One unit of the newly constructed Ragged Rapids plant placed in service October 18, 1938.

AND PURCHASED—ALL SYSTEMS

POWER PURCHASED

Power source	Contract amount horsepower Oct. 31, 1938	Total purchased	
		1936-37 kilowatt-hours	1937-38 kilowatt-hours
Canadian Niagara Power Co.	20,000	124,114,800	85,139,200
Gatineau Power Co.—25-cycle	165,000	629,556,200	701,642,880
Ottawa Valley Power Co.	108,000	284,699,350	352,019,350
MacLaren-Quebec Power Co.	40,000	183,301,000	180,097,000
Beauharnois Light, Heat and Power Co.	125,000	....	509,900,000
Welland Ship Canal*	....	71,000	0
Campbellford Water & Light Commission	800	952,800	3,699,700
Fenelon Falls Light, Heat & Power Commission*	....	6,800	1,050
M.F. Beach Estate	500	1,446,400	1,567,200
Rideau Power Co.**	....	3,051,600	2,563,600
Ottawa & Hull Power & Mfg. Co.	20,000	63,352,800	65,019,600
Gatineau Power Co.—60-cycle	60,000	190,355,500	195,820,270
Orillia Water, Light & Power Commission†	....	197,200	124,380
Manitoulin Pulp Co.	205	333,600	444,100
Abitibi Power & Paper Co.	500	972,722	158,557
Kaministiquia Power Co.‡	....	31,104,480	16,717,920
Total purchased	540,005	1,513,516,252	2,114,914,807

Power purchased, contract amount, 1938	540,005	horsepower	
Maximum normal plant capacity, 1938	1,519,400	“	
Total available capacity generated and purchased, 1938	2,059,405	“	
Total available capacity generated and purchased, 1937	1,816,175	“	
Difference (increase)	243,230	“	
Total energy purchased, 1938	2,114,914,807	kilowatt-hours	
Total energy generated, 1938	5,467,157,766	“	“
Total energy generated and purchased, 1938	7,582,072,573	“	“
Total energy generated and purchased, 1937	7,750,574,256	“	“
Difference (decrease)	168,501,683	“	“

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*Emergency use.

**Contract expired and Commission ceased taking power from the Rideau Power Company on September 14, 1938.

†Reciprocal arrangement for surplus power and emergency use.

‡Purchased on kilowatt-hour basis.

CAUTION: The figures for "Maximum normal plant capacity" reflect the capacity of the various plants under the most favourable operating conditions which can reasonably be considered as normal, taking into consideration turbine capacity as well as generator capacity, and also the net operating head and available water supply.

Owing, among other things, to changes in generating equipment due to wear and tear or the replacement of parts, also to changes in limitations governing water levels and effective net heads, the maximum normal plant capacity is not a fixed quantity but is one which must be revised from time to time.

It is particularly important to bear in mind that the column headed "Maximum normal plant capacity" cannot be taken as an indication of the dependable capacity of the various plants: in some cases, it is, but in many cases it is not. Chief among the factors which govern the maximum dependable capacity of a hydraulic power plant and which are not reflected in column headed "Maximum normal plant capacity" are abnormal variations in water supply and operating limitations encountered when plants are so situated on a given stream as to be affected by one another.

The tables given herein show the maximum load of each municipality in a six months' period ending December 31, 1938 and in the corresponding period of 1937. Under normal conditions the peak load of the calendar year in nearly all municipalities occurs in the latter half of the year, but in any case the peak loads recorded during this period, year after year, will give a more reliable indication of load trend than would either the October peak or the peak for the calendar year, which in the case of a downward trend might occur in December one year and in the following month for the next calendar year.

FORESTRY DIVISION

The Forestry division continued its regular transmission and rural line clearing operations to protect the Commission's lines, equipment and service from tree interference.

Reforestation was continued on non-revenue producing lands in the Niagara system. Work was also carried out on generating and transformer station grounds for the preservation and maintenance of trees and shrubs.

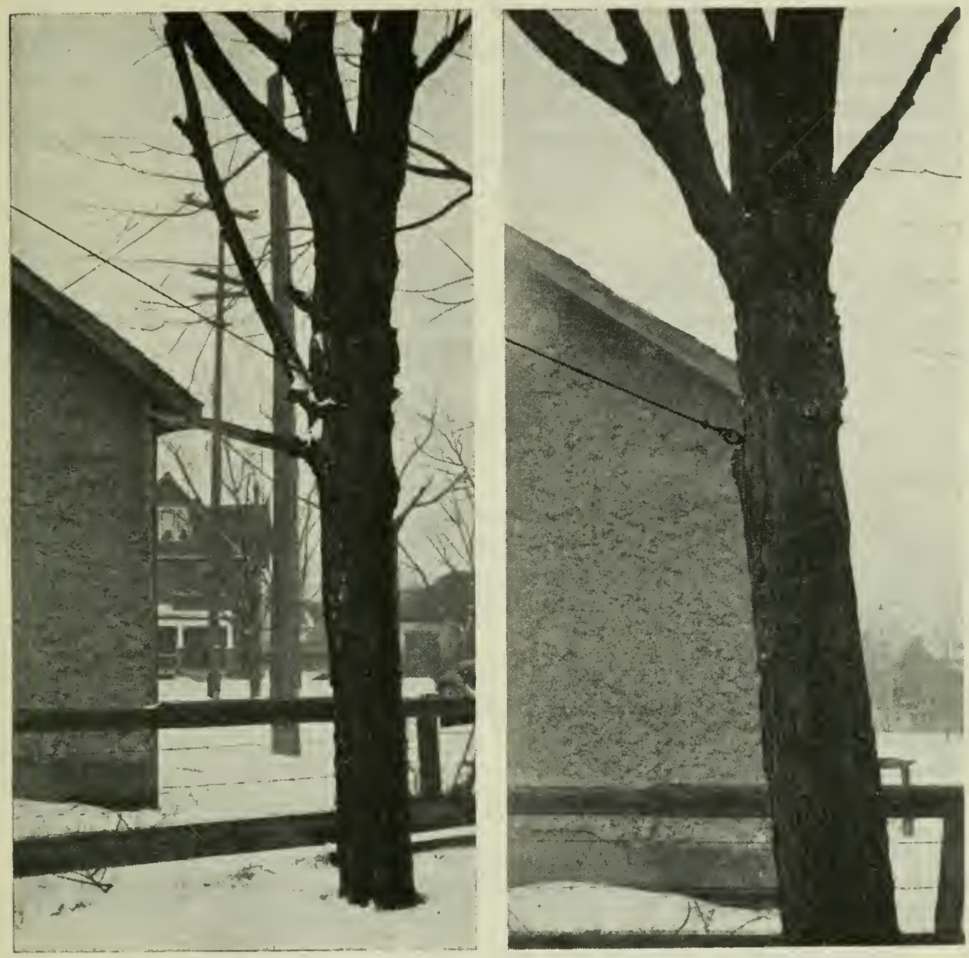
A detailed description of the work performed will be found in the succeeding paragraphs.

Transmission and Rural Line-Clearing Operations

The year's operations involved treatment of 79,800 trees and 316 pole spans of underbrush spread over 3,299 miles of power transmission, rural distribution and telephone line. The average pruning cost, including all expenditures for labour, material, expense and forestry overhead, exclusive of cabling structurally weak crotched trees, diseased tree removals and underbrushing, was $1.05 per tree.

DISEASED TREE HAZARD

Trees similar to the one shown constitute a menace to life, service and property. A systematic diagnosis and removal of diseased trees prevents prolonged service interruptions and serious damage



Wrong

Right

ATTACHING GUYS TO TREES

The above illustrations show wrong and right methods of attaching guys for poles or wire fencing to trees. The thin cambium layer immediately beneath the bark is essential to the circulation of nourishment and the life of the tree. Cutting or compressing the cambium layer around the complete circumference of the tree will stunt or kill it, while a hole in to the centre of the tree for a screw eye, if properly sealed, does little harm

Rural work was noticeably increased by reason of the county and township roads taken over by the Department of Highways, and the construction of new lines on the King's Highways. This additional work involves 28,200 trees spread over approximately 509 miles of line.

During the course of line-clearing operations, rural linemen were given elementary lectures and instructions in the approved safety rules and scientific methods of treating trees for line clearance. This was supplemented by a practical training program consisting of a minimum period of three weeks or 144 hours, under the supervision and direction of foresters.

New Construction Line-Clearing Operations

Operations were performed to obtain clearance for approximately 111 miles of new transmission and rural line. The work involved treatment of 3,800 trees, removal of 19 pole spans of underbrush and 524 diseased and dangerous trees at an average cost of $1.88 per tree, including all expenditures for labour, material, expense and Forestry overhead.

Reforestation

Reforestation operations involved planting of approximately 25,000 coniferous and deciduous trees to replace losses at bridge approaches and along the Chippawa-Queenston canal, also some small extensions on property adjacent to DeCew and Queenston generating stations and Ontario Power and Toronto Power transformer stations.

The entire cost of the work amounted to $1,063.

Municipal Hydro Systems

Line-clearing operations were performed for Beamsville, Burlington, Exeter, Grimsby, Highgate, Jarvis, New Toronto, and Ridgetown on the Niagara system; Alliston, Beaverton, Chatsworth, Flesherton and Wiarton on the Georgian Bay system; Arnprior and Peterboro on the Eastern Ontario system.

The work involved treatment of 3,066 trees spread over approximately 52 miles of distribution line. The cost amounted to $2,969, an average cost of 97 cents per tree.

RADIO COMMUNICATION

The Commission short-wave radio stations at Toronto and in the generating stations at Cameron Falls, Ear Falls and Rat Rapids have continued to operate satisfactorily.

This equipment provides the only means of communication with the plants at Ear Falls and Rat Rapids during periods in the spring and fall when, owing to seasonal climatic conditions, mail and transportation services from these points are suspended.

NIAGARA SYSTEM

Operation

During the year there was no extensive major service interruption to customers in the Niagara system. On April 8 and 9, a snow and sleet storm, which was most severe in the area extending between Niagara Falls and Dundas, was the cause of a number of 110,000-volt line outages, which in one instance resulted in an interruption to the majority of the customers supplied from the 110,000-volt stations. The usual electrical storms during the summer were the cause of numerous interruptions, but in general the interruptions were of short duration, and the little damage done was confined to the low-voltage lines and equipment. There was no complete interruption to service on the 220,000-volt lines during the year although there were fourteen individual circuit outages, eleven of which were due to lightning.

In general the Niagara river plants have been operated in conjunction with the Quebec power sources during the year to meet system load requirements to the best advantage from the water available. An ice jam in the Niagara river in January flooded the Ontario Power plant and disabled it for months. Details regarding flooding and rehabilitation are given in this Report under the heading "Ontario Power Station."

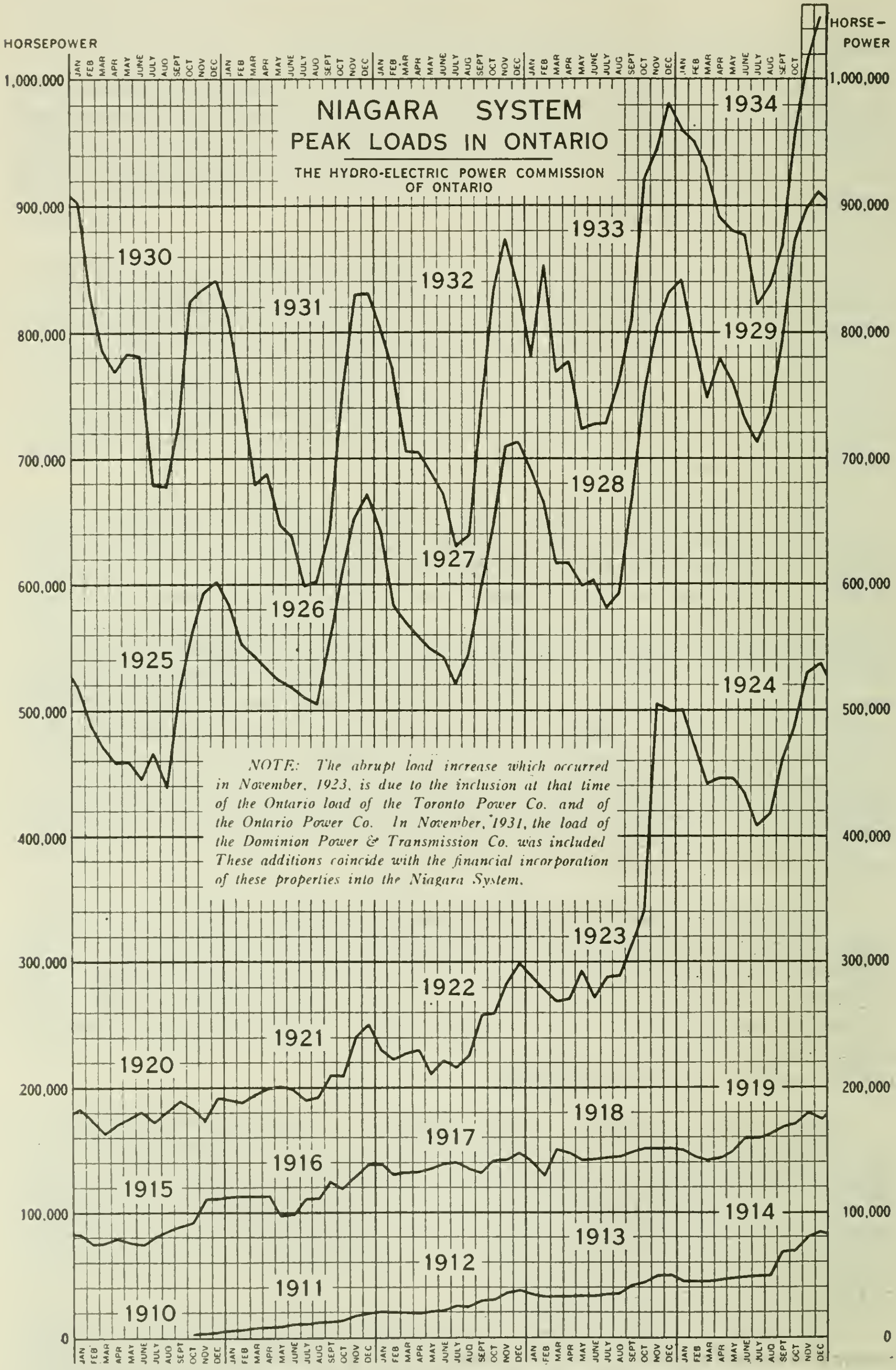
On December 1, 1937, the contract demand under the Gatineau Power Company contract was increased from 140,000 to 165,000 horsepower, and on December 14 the Commission commenced taking 125,000 horsepower under a new contract with the Beauharnois Light, Heat and Power Company. On December 12, 1937, arrangements were made with the Gatineau Power Company for the delivery of about 27,000 horsepower of 60-cycle power at ValTetreau for use on the Eastern Ontario system in lieu of delivering 25-cycle power to the Niagara system under the 25-cycle contract.

The Chats Falls generating station has been operated throughout the year to the best advantage, as governed by the Ottawa river flow, and the ability to utilize this station's output in conjunction with eastern sources of supply. Natural conditions on the Ottawa river drainage basin were better than average during the fall months of 1937. As a result the Quinze and Temiskaming reservoirs entered the winter season at approximately full reservoir elevation. The natural yield during the winter months was also higher than average, thus requiring less withdrawal from storage to maintain satisfactory flow conditions at Chats Falls. During the winter season the flow was approximately sufficient to meet plant energy requirements. Spring run-off began on March 21, or approximately ten days earlier than normal, and reached a maximum on April 24 of 146,970 cubic feet per second. The minimum flow of 18,430 cubic feet per second occurred on September 5. On the whole, Ottawa river flow conditions were very satisfactory over the year.

The frequency-changer set at Chats Falls was available as a reserve source of supply for the Eastern Ontario system during the year. The set was operated on several test runs in the fall of 1937 and on two occasions it was required for emergency service. During the latter part of October, 1938, it was frequently operated when the Gatineau Power Company placed limitations on the transfer of 60-cycle energy to the Eastern Ontario system in lieu of 25-cycle energy to the Niagara system.

DeCew Falls generating station operated continuously throughout the year, supplying power to the Dominion Power and Transmission division of the Niagara system. Load demands on this division in excess of the capacity of the DeCew Falls generating station were met by the 9,000-kv-a frequency-changer set at Niagara Falls. This set, which is supplied from one of the Toronto Power units, was used on practically every working day but was usually only required over the day peak period.

The Hamilton Steam station was available during the year as a limited standby reserve for the Dominion Power and Transmission division. The steam station rendered assistance on seven days of the year when the continuity of



NIAGARA SYSTEM
PEAK LOADS IN ONTARIO
THE HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO

NOTE: The abrupt load increase which occurred in November, 1923, is due to the inclusion at that time of the Ontario load of the Toronto Power Co. and of the Ontario Power Co. In November, 1931, the load of the Dominion Power & Transmission Co. was included These additions coincide with the financial incorporation of these properties into the Niagara System.

HORSEPOWER
HORSE-POWER
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC
1930
1931
1932
1933
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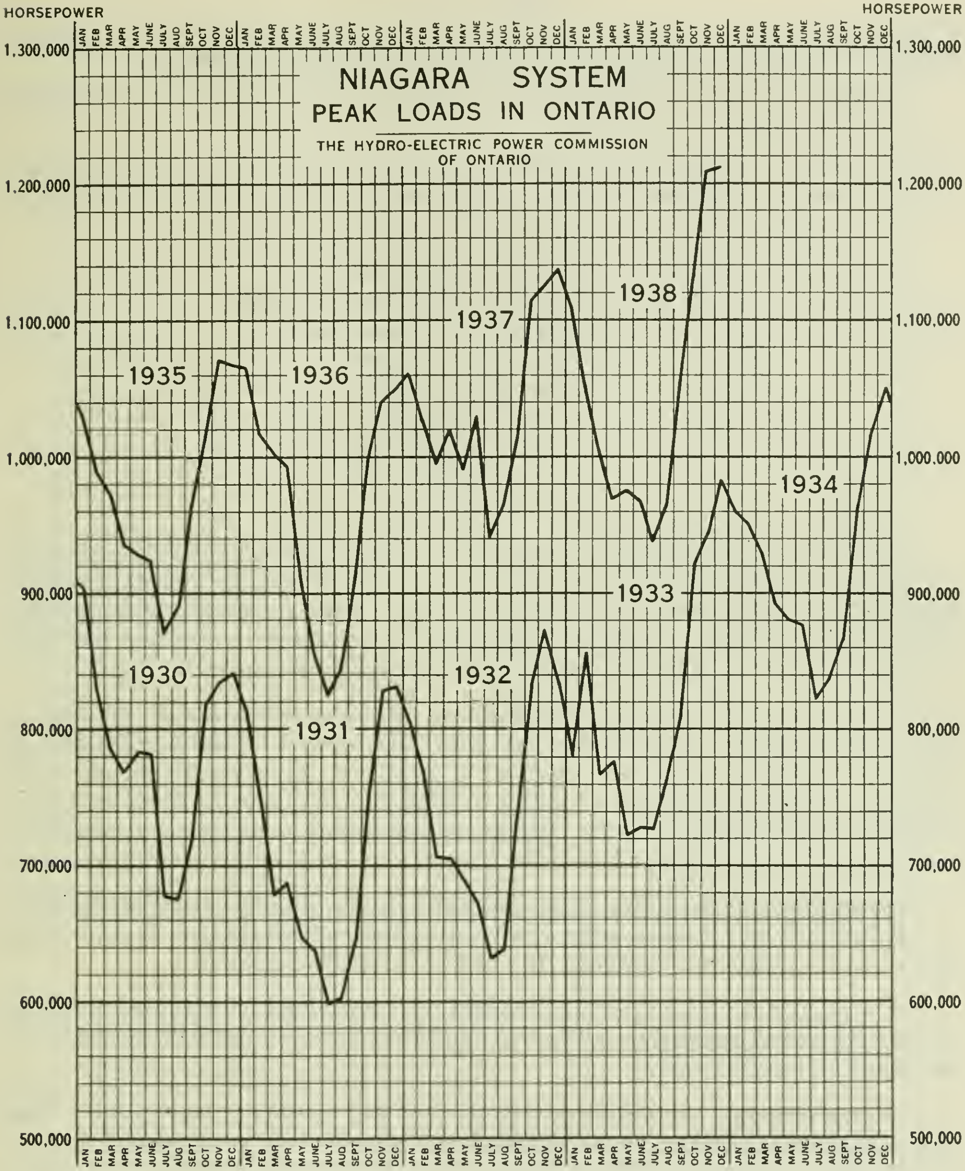


NOTE: This diagram is a continuation of that on facing page

service was threatened due either to ice conditions or to emergencies arising in the DeCew Falls generating station. Following the normal operating practice, one generator was kept available for power purposes and the other was operated as a synchronous condenser floating on the Hamilton section of the 60-cycle system. The boiler plant was used for generation of steam for commercial purposes.

The load of the Stoney Creek distributing station was transferred to the Fruitland distributing station on November 10.

Maintenance

Queenston Station

During the year all equipment in this station was available for service as and when required.

Generators and turbines were removed from service during the summer months for inspection and necessary maintenance work, as noted below:

Number 1 unit from September 20 to September 30,
" 2 " " August 12 to August 26,
" 3 " " September 8 to September 20,
" 4 " " August 26 to September 8,
" 5 " " August 2 to August 10,
" 6 " " May 24 to June 3,
" 7 " " July 4 to July 15,
" 8 " " July 18 to July 30,
" 9 " " June 18 to June 30,
" 10 " " June 6 to June 17.

All the above-mentioned machines and their allied equipment were given a complete inspection without dismantling. The turbines, governors, governor pressure control system, brake rings, lignum vitae bearings, packing, etc., were repaired where necessary. The generators, exciters and allied electrical equipment were all inspected and repairs made where required.

In addition to the above-mentioned work, a considerable amount of welding was carried out on the upper draft tube section of number 2 unit. The position indicator rod of the number 3 Johnson valve was replaced; some welding was necessary on one of the turbine runner vanes of number 4 unit. Repairs were required on the number 8 unit draft tube cone, consisting of replacing the shroud plates below the cone cap where they had been torn away.

Special screens were built and installed in the generator air intake ducts to prevent winged insects being drawn into the generators. A vacuum pump and cleaning tools were designed and built to clean these screens.

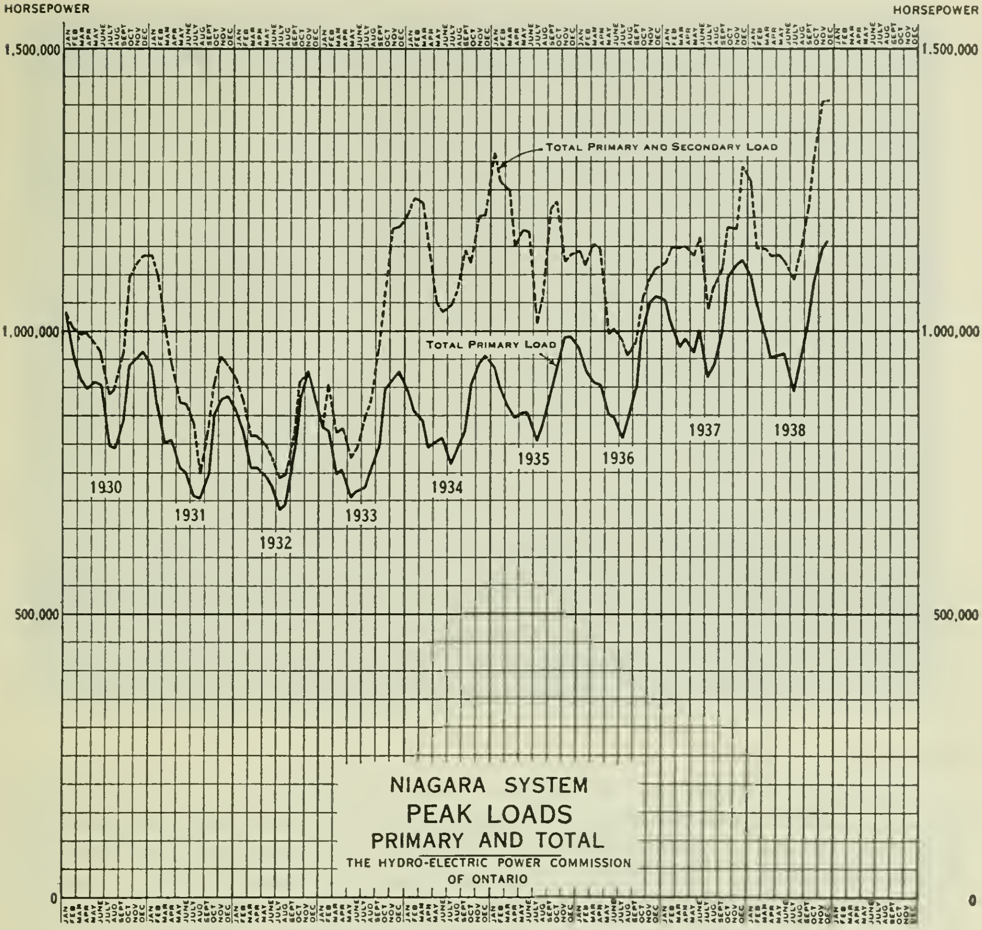
Two 110,000-volt oil circuit-breakers were equipped with special contacts to increase their rupturing capacity, and two further units will be equipped early in the coming year.

Transformers, oil circuit-breakers, cables, meters, relays and other miscellaneous apparatus were examined and repaired where necessary.

The remedial work on the cliff face between the penstocks was proceeded with during the summer. This work was necessary to prevent rock falling on the power house roof, due to gradual erosion of the cliff face. Buildings were painted and repaired as found necessary, and some work done on the railway siding leading into the plant.

In addition to supplying the plant requirements, the machine shop carried out a certain amount of work for the other plants.

Some concern existed during the period of high water and ice conditions in February and March, at which time the river level varied from twenty to thirty feet above normal. The only damage done was the lifting and breaking



SUPPLEMENTARY DIAGRAM—NIAGARA SYSTEM PEAK LOADS

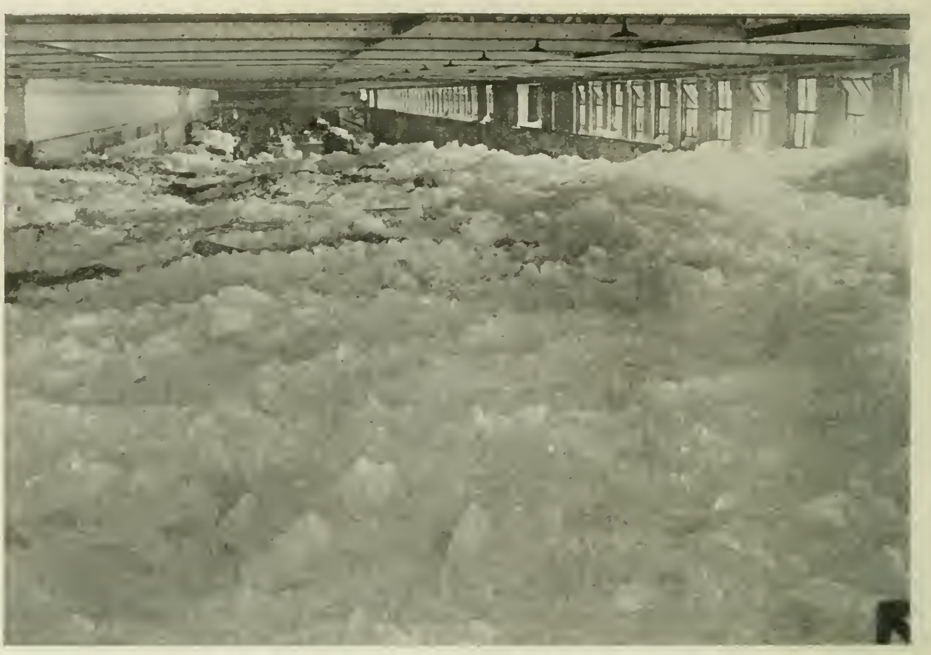
Notes

TOTAL PRIMARY LOAD: Primary power is power which the Commission is under contractual obligation to supply and for which it is obligated to hold in reserve adequate capacity. The graph above includes only the actual delivery of such power, and does not include the amount by which the primary power contracts exceed actual deliveries.

TOTAL PRIMARY AND SECONDARY LOAD: Includes, in addition to the primary load, at-will power which the Commission is under no obligation to hold in reserve. Such power has been sold in Ontario and exported to Quebec and the United States. The above graph includes all secondary power and therefore differs from the graphs on pages 14 and 15 which show only the load in Canada

of the concrete tail-race covers, the undermining of railway tracks and the scouring of banks adjacent to the power house. At this time the south and east walls of the power house up to elevation 310 were reinforced by temporary timber construction. Also, as a precautionary measure, additional pump capacity was installed to assist permanent sump-pump equipment.

Connections were installed between transformer banks 3 and 4, and between 7 and 8, to provide a tie between these banks in case high water prevented the operation of equipment on the lower floors.



ONTARIO POWER GENERATING STATION—REHABILITATION

Figure 1—The interior of the powerhouse, facing the down-stream end, after the water had receded

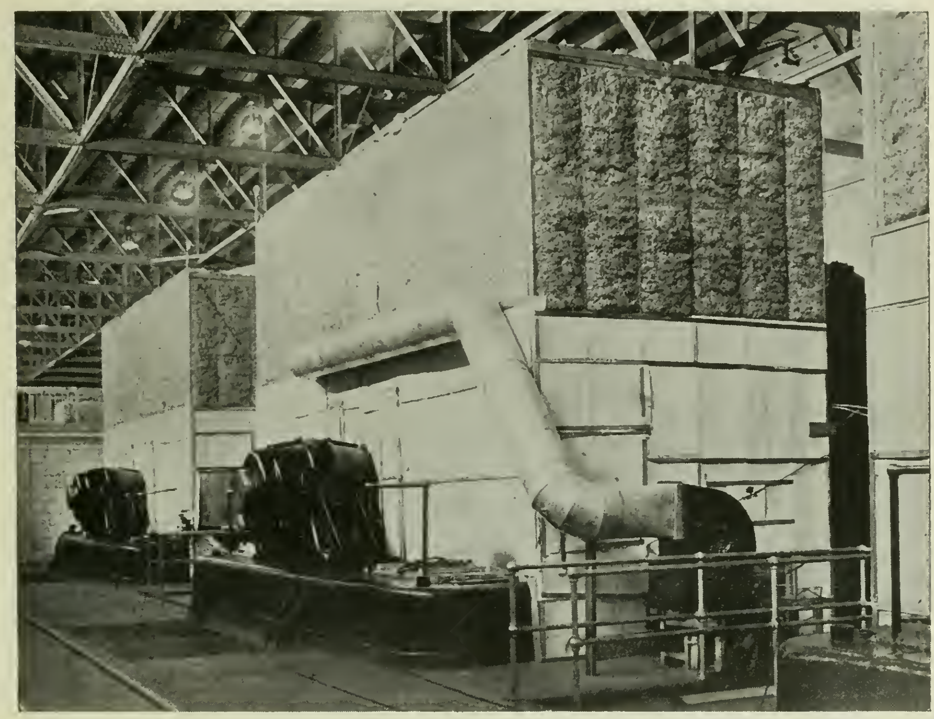
Ontario Power Station

The Ontario Power station, situated on the river bank below the Horseshoe Falls at Niagara, was inundated on January 26, 1938. Although this plant was protected against a water elevation of 48.75 feet above normal pool level, this was exceeded when a heavy run of ice from lake Erie and the Upper Niagara river temporarily blocked the flow of water under the ice bridge.

The ice at the south end of the plant, which was pushed up some 58 feet above the normal pool level, flowed through the windows above the crane rail and, along with the water, buried all equipment in about one-half of the station, as shown in accompanying illustration, Figure 1. The ice also completely blocked the road entrance to the north end of the plant.

Fortunately the Commission had sufficient capacity available to allow for the transfer to other plants of the 180,000 horsepower load formerly supplied by the fifteen machines. This made it possible to proceed with rehabilitation in a methodical manner. The first operation, after the water had cleared from the plant (approximately 24 hours) was to start cleaning up and removing the ice from the roadway entrance. Eight days were required to move in materials and supplies. Gasoline shovels and trucks, working for 32 days, removed the 14,250 cubic yards of ice in the power house. The work of cleaning up the building and equipment was a time-consuming task as the water had floated between 15,000 and 20,000 gallons of oil from the transformers, switches and various pieces of equipment, coating all exposed surfaces as the water receded.

Two of the motor-generator exciter sets, which were placed on dry-out with hot air on February 2, were restored to service on February 10, to supply power for crane operation.



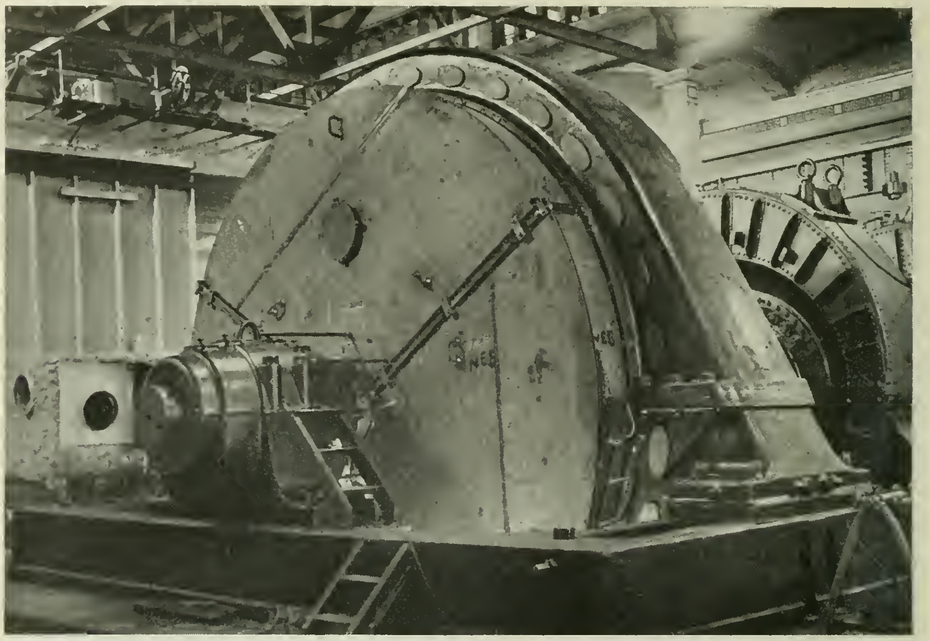
ONTARIO POWER GENERATING STATION—REHABILITATION

Figure 2—The hot air circulating system

As fast as the main units in the north end were cleaned and material became available they were totally enclosed by constructing an insulated housing around them, and drying-out operations commenced by forcing hot air through the machines at high velocity. The air was heated by electric heaters to a temperature of 120 to 125 degrees Centigrade. The first machines on dry-out were units 11 and 12 on February 17, with five additional by March 5. This set-up and construction is shown in Figure 2. The dry-out was started with the machine at rest, and continued for about 12 to 14 days in order to dry the field coils sufficiently to enable the insulation to withstand the crushing effect of centrifugal force when the fields were rotated. The machines were then run at reduced speed until the insulation resistance on the fields reached 200,000 ohms. This required about eighteen days, after which they were put on short-circuit up to full-load current to maintain a temperature of 85 degrees Centigrade on the windings, with hot air and internal heating. Six to seven weeks' operation on short-circuit was required for complete dry-out, or a total period of 10 to 12 weeks per unit.

In this final period it was found necessary to run the machines through five or more cycles of cooling and reheating to provide a temperature gradient between the inside and outside of the armature coil insulation which would facilitate the movement of any moisture trapped in the coil.

The use of vacuum tanks proved very successful in drying out motors of all voltages up to 2,200 and up to 250 horsepower, service transformers of 12,000 volts, auto starters, etc., in from 24 to 48 hours. This method was also



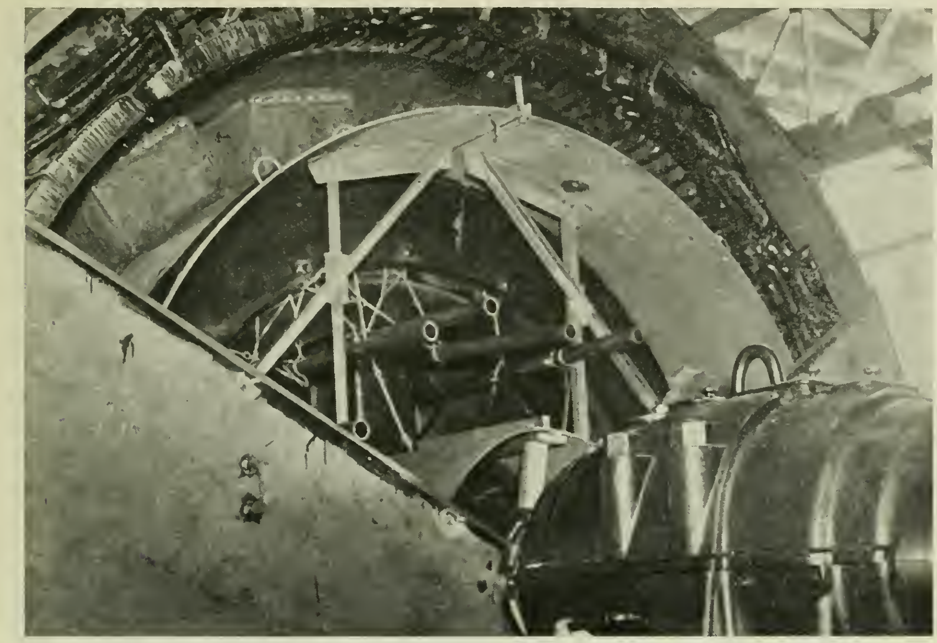
ONTARIO POWER GENERATING STATION—REHABILITATION
Figure 3—The air-tight metal casing

used with success on meters, relays, instrument transformers and similar small equipment, overhaul and recalibration of course being necessary on completion of the dry-out. As a result it was decided to design and build an air-tight metal casing to enclose the armature windings, fields, and iron of the seven machines which were buried in the ice, in order to dry these out under heat and vacuum with the rotor at rest. The construction of this enclosure is shown in Figures 3 and 4. It was housed in as shown in Figure 2 to provide for external heat supply.

After assembly of all equipment the machines were heated to 90 degrees Centigrade by circulating hot air through openings in the vacuum enclosure, assisted by about 50 kilowatt of energy supplied by direct current circulated through the stator windings connected in series. The air-tight housing was then sealed.

The vacuum pumps were started and the air pressure dropped in about 2½-lb. steps, regulating the internal temperature so that it did not exceed by more than 10 degrees Centigrade the boiling point of water at that pressure, in order that there would be no danger of developing sufficient steam pressure inside the coil to burst the insulation. The time required for the dry-out run was about four days, which included the time necessary to bring the machine up to temperature, and the application of the vacuum for 24 to 36 hours. A total of about 7 to 10 days was required to completely assemble and dismantle equipment and dry out the machine.

All main generators were dried out by the methods described with the exception of number 3 unit, which was immediately rewound with a set of spare coils carried in stock.



ONTARIO POWER GENERATING STATION—REHABILITATION
Figure 4—The bracing for the vacuum chamber

As far as the main generators were concerned, the greatest difficulty was found in the field windings, as the fibrous insulation was completely water soaked and on dry-out the fibre insulating collars were warped and cracked, while the glued, laminated wood collars separated into thin pieces. Tests also indicated many short-circuited turns in the coils.

The field coils on eight of the generators were removed, vacuum dried and cleaned, short-circuited turns repaired, completely impregnated with bakelite and reinsulated with fabricated materials having high mechanical strength, good insulating values, high temperature and low moisture absorption qualities. As this work could not be completed on all generators in time for the winter loads, six machines remain to be taken care of during the coming year.

The immediate saving in drying out the stators of the 14 main generators, against the cost of supplying and installing new stator windings, approximates some $450,000.

The main units were returned to service on the following dates:

Number 1—July 29	Number 6—June 8	Number 11—April 28
" 2—July 29	" 7—April 29	" 12—July 31
" 3—May 8	" 8—August 1	" 13—July 31
" 4—June 22	" 9—Sept. 16	" 14—May 16
" 5—May 27	" 10—August 28	" 15—July 31

In the rehabilitation of this plant, all control and station service wiring required replacement. These leads of rubber-insulated lead-covered cable were carried in large groups of horizontal conduit, and could not be cleared of water and oil *in situ* as it was found that the rubber insulation was very brittle, as well as water soaked. All leads were replaced by new cable installed in accordance with present standards of design.

Previous to the flood, consideration was being given to moving the control room from the station on top of the hill to the generating station. After the flood, the time appeared opportune for such a change as it would avoid the need for replacing control cables between the generating station and distributing station, and would consolidate the operating staff. The re-routing of many cables direct to Niagara transformer station, and the discontinuance of local services from the Ontario Power distributing station, will eliminate the necessity for a complete operating staff in the distributing station. A control room, with new bench-type switchboard, was designed and is being installed in the generating station, with the work about 75 per cent complete at the end of the fiscal year.

On August 2, several coils in the stator winding of number 15 generator failed in service. Close examination did not indicate that this failure was in any way connected with the flooding of the plant. As a result of the tightness of the coils in the slots, making it impossible to lift them without damage, it was found necessary to install a complete new winding. This machine was returned to service on October 19.

Toronto Power Station

The Toronto Power station, ordinarily used as a peak load plant, was operated to capacity from January 26, 1938, when the Ontario Power plant was flooded, until August 1, when most of the machines in the latter plant were returned to service.

Failures of coils in number 1 generator occurred on July 11 and 12; these were repaired and the machine returned to service in one and two days respectively.

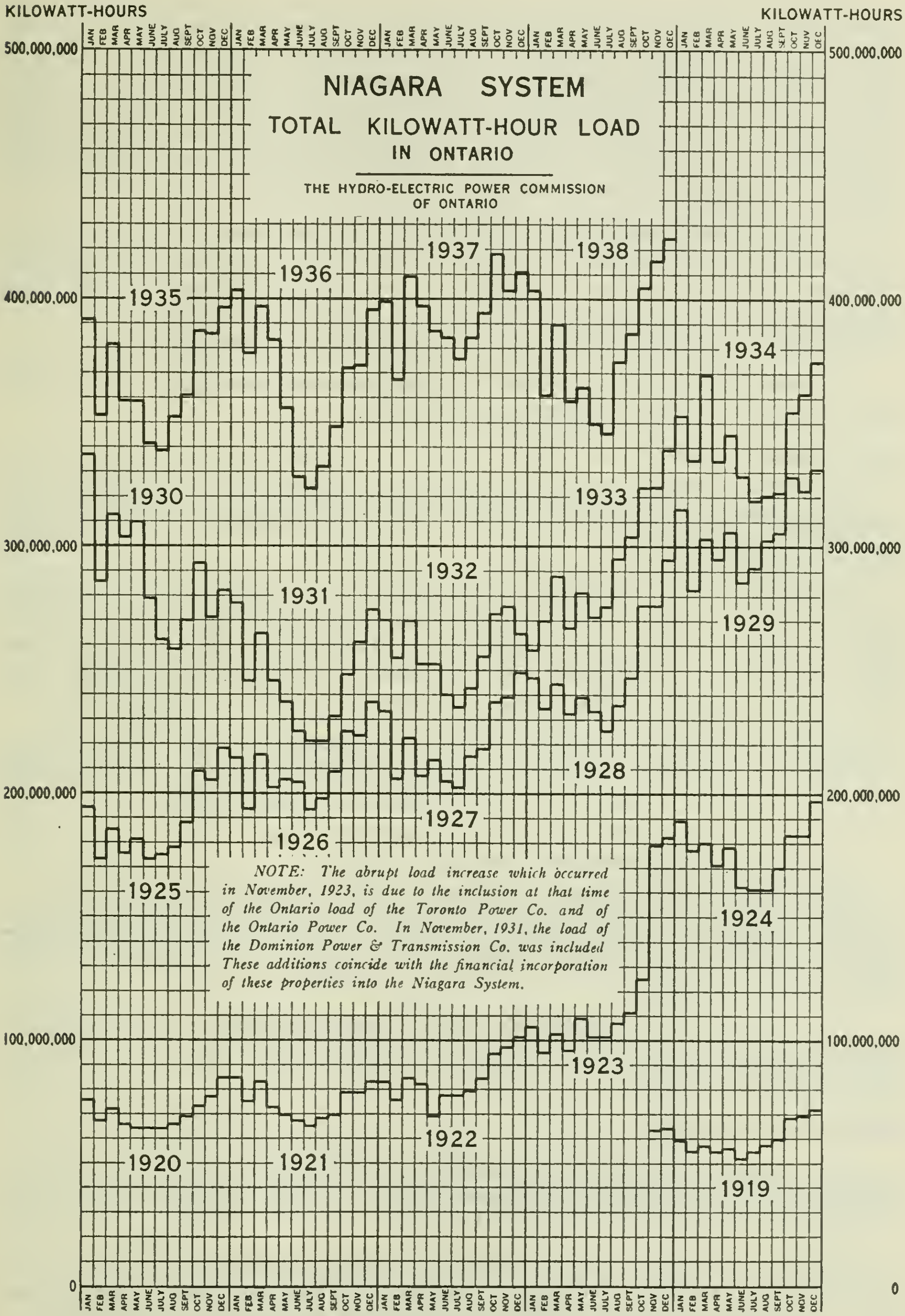
The armature winding of number 3 machine failed on July 11, and as there had been a number of coil failures in this unit, during recent years, it was decided to install the second new-type winding purchased in 1937, similar to that used in number 2 generator last year. While this work was progressing, the turbine was dismantled and completely overhauled. The machine was being re-assembled for dry-out run at the end of the year.

As the shop equipment and maintenance staff at this plant were being fully used in the rehabilitation of the Ontario Power plant, only the vital items of maintenance were carried out.

Chats Falls Station

The four generating units and auxiliary equipment of the Commission were available for operation during the year, as well as the four machines of the Ottawa Valley Power Company.

The submerged head gates and turbine gates of units 2, 6 and 8, were thoroughly cleaned and painted. A large number of barnacle formations were observed, covering eroded spots from 1/64 to 1/16 inch in depth and about one and one-quarter inches in diameter. Close examination revealed a small worm, which was afterwards found to be the larvae of a species of May fly and responsible for these formations.



NIAGARA SYSTEM

TOTAL KILOWATT-HOUR LOAD IN ONTARIO

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

NOTE: The abrupt load increase which occurred in November, 1923, is due to the inclusion at that time of the Ontario load of the Toronto Power Co. and of the Ontario Power Co. In November, 1931, the load of the Dominion Power & Transmission Co. was included These additions coincide with the financial incorporation of these properties into the Niagara System.

The headworks and dams were inspected. Three of the main boom cribs in the forebay, which had been toppled over by the ice, were rebuilt. The woodwork on the emergency sluice gates was overhauled, painted and a cavity in the retaining wall was repaired. Rock between the old apron and tail-race level on number 4 sluiceway was removed, and the apron extended to the down-stream water level in order that this location might be used for driving commercial logs. It is estimated that some 650,000 pieces of pulpwood and pine logs were passed through the dam during the season.

In the power house the tile cable ducts on the breast wall of the dam, which carry cables from the four Ottawa Valley generators, were removed and replaced with wood racks to eliminate corrosion of the lead sheaths from seepage water coming through the cement of the dam structure. This work was similar to that carried out on the Commission's cables last year.

Routine inspection and general maintenance was carried out on all equipment, buildings, roads, structures and grounds.

DeCew Falls Station

The DeCew Falls station, which is the main source of supply for the 66-2/3-cycle Dominion Power section of the Niagara system, gave satisfactory service during the year.

Number 5 unit was removed from service on April 18 for a complete overhaul. The turbine runner and gate shafts were built up by welding, the main turbine and rocker arm bearings were re-babbitted, and a new set of seal rings and gate shaft bushings were installed. The generator windings were cleaned and varnished. This unit was returned to service on August 16.

Number 7 unit was out of service from September 6 to October 18 to install a new butterfly valve and expansion joint between the penstock and turbine to replace the gate valve which failed in service in 1937.

At the gate house all racks were removed and rebuilt to give a better flow of water and to facilitate their removal for repairs.

Mechanical and electrical maintenance was performed as required to maintain the plant in good operating condition. The roads, bridges and waterways, comprising the headworks and storage basin, were inspected and repaired where necessary.

The houses in the operators' colony were reconditioned. This work included the installation of new furnaces, painting, decorating and improving the cellars and drainage.

Hamilton Steam Plant

The steam power station at Hamilton was operated as a standby reserve during the year to provide emergency power to the Dominion Power and Transmission division of the Niagara system.

Repairs were made to the wood enclosure of the condenser discharge tunnel, locomotive crane boilers and coal conveyor. The station storage battery was given a complete overhaul. Additional metering equipment was installed to give a complete record of the input and output of the turbines and generators.

Routine building and equipment maintenance was carried out.

Transformation

The Leaside 220,000-volt transformer station gave satisfactory serivce, although regular operation and maintenance work was carried out under some difficulty due to the construction work involved in the installation of two additional banks of transformers and the necessary switching equipment for these and the two new outgoing 110,000-volt lines. In addition to the ordinary maintenance work, the staff assisted in the modernizing of four 220,000-volt and three 110,000-volt oil circuit-breakers in the present equipment. and the installation of five new 110,000-volt breakers. For the installation of the new transformers it was necessary to rebuild the 75-ton crane in the erection room to give a capacity of 100 tons.

At the Strachan Avenue (Toronto) station the staff assisted in modernizing two 110,000-volt oil circuit-breakers in the present equipment and the erection of three new 110,000-volt oil breakers.

The testing of bushings by the potential gradient method developed by the Commission's Laboratory was used to check the condition of some 2,400 transformer and oil circuit-breaker bushings; of these 80 were found to show some indication of deterioration in the insulation. These units were replaced, thereby preventing their damage by complete failure and the attendant interruptions to service. The defective units as removed were dismantled, repaired and returned to service. There were no failures of high-voltage transformers during the year.

Control batteries were replaced at Brant, Cooksville, York and New Toronto stations.

Extensive building maintenance was carried out at thirteen stations and included pointing and relaying of brick on parapet walls where necessary, plastering, repairs to roof and sidewalks. All equipment was regularly inspected and repaired where necessary.

Transmission

The 220,000-volt transmission lines gave satisfactory service and required little maintenance. Regular patrol of all circuits was carried out, as well as underbrushing on approximately 4,400 acres under and in the immediate vicinity of the lines. Approximately six miles of additional patrol roads were constructed.

On the 110,000-volt transmission circuits, angle-iron footings on 124 McGuigan-type and 120 Windsor tandem-type towers were inspected and reinforced. Line changes were made at Allanburg Junction to provide two direct feeds from Queenston to St. Thomas, Chatham, Windsor and St. Clair in order to give these municipalities better voltage regulation.

Insulators were inspected, tested and defective units replaced on some 210 miles of 110,000-volt lines, 14 miles of 60,000-volt lines and 68 miles of 46,000-volt lines.

On the Dominion Power 44,000-volt transmission lines, 14,190 insulators were inspected and 250 defective units were replaced.

Regular patrol and general maintenance were carried out on all lines.

The operating telephone lines were regularly patrolled and maintained in good condition and some 9 miles were rebuilt. Generally speaking, service on the private telephone lines of the Commission has been improved during the past few years.

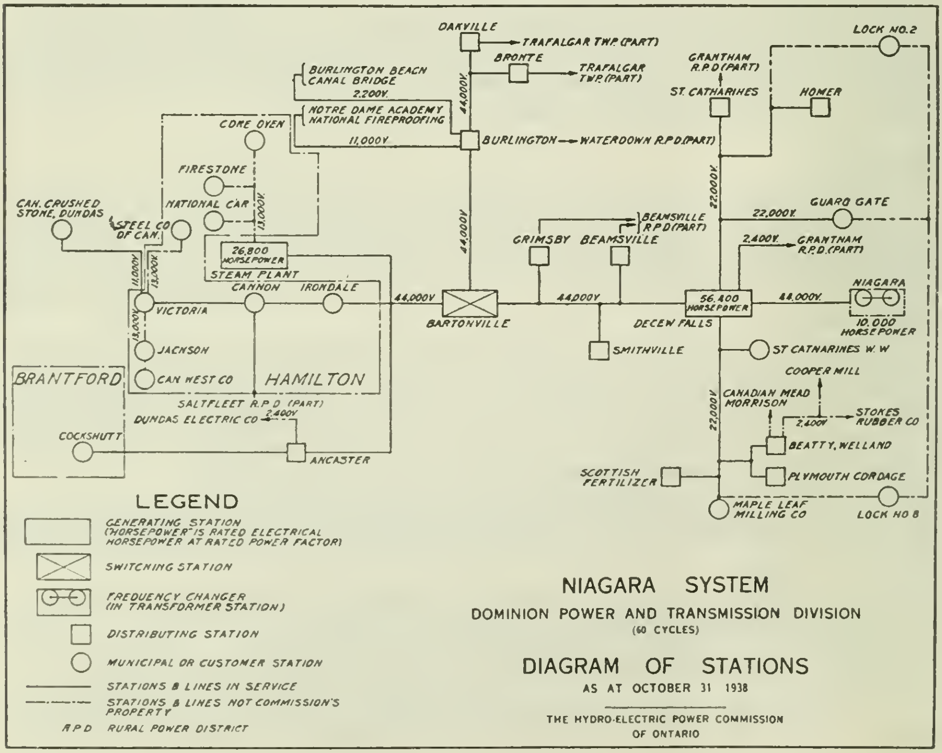
Distribution

There were nine failures of low-tension transformers during the year, two of which were scrapped, four rebuilt by the field maintenance staff, and three by the manufacturers. Thirty-eight transformers were dismantled, cleaned and repaired where necessary. All equipment, including oil circuit-breakers, was inspected and repairs and readjustments made where required.

On low-tension wood-pole lines no extensive difficulties were encountered, although in the Chatham and Brantford area a severe wind storm caused some damage, resulting in interruptions to service in some districts.

The ground wire was removed from some 208 miles of 13,200 and 26,000-volt lines, and the conductor was transferred to pole-top pins on approximately 141 miles to get better wire spacing; 44 miles of rural primary circuits were erected on power and telephone lines. As a result of highway reconstruction, it was necessary to relocate or rebuild at various places a total of some eight miles of line.

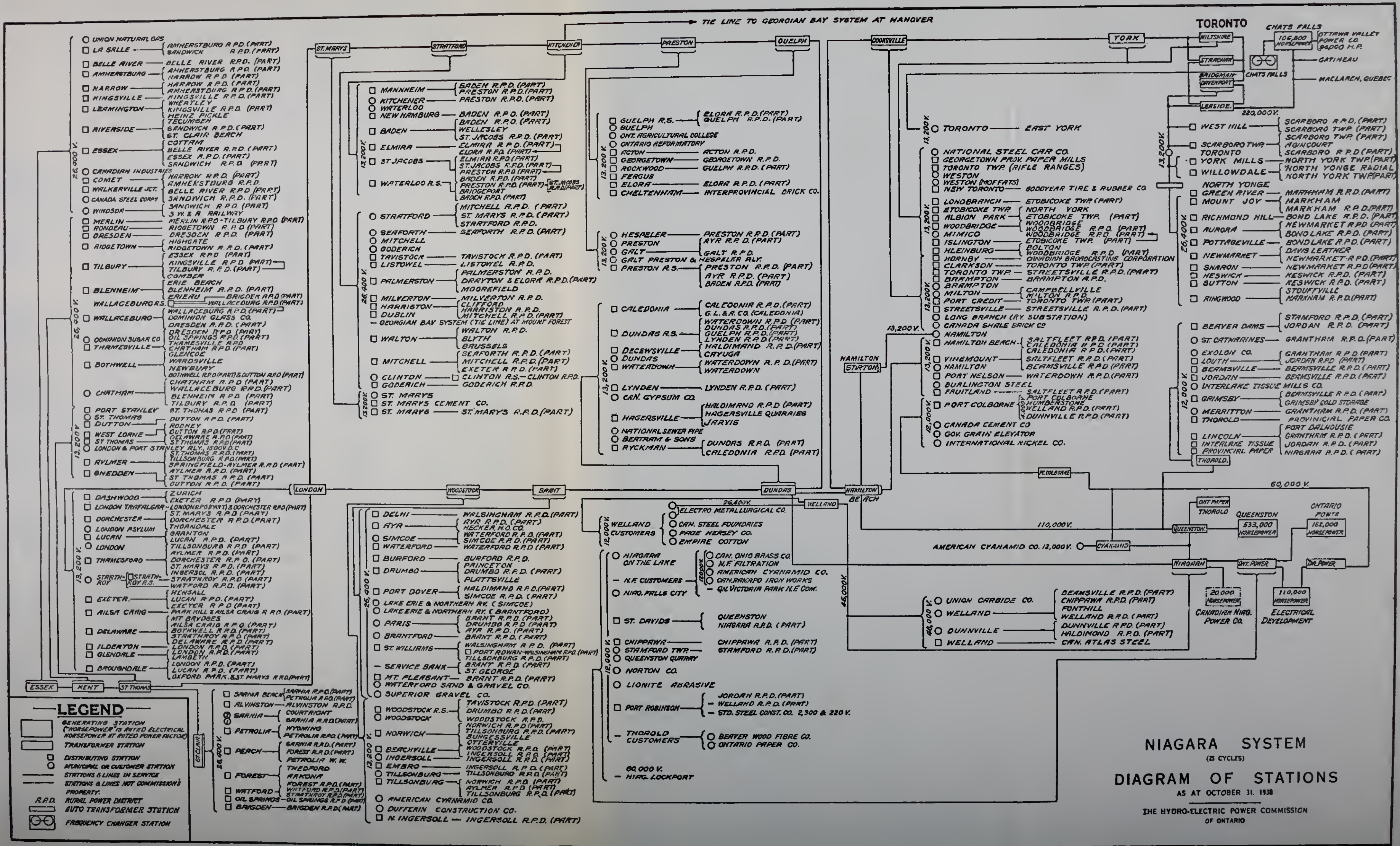
In the maintenance of these circuits, approximately 3,380 poles were replaced, lowered or stubbed to maintain pole strengths to Commission standards, and some 11,000 sand-creosote collars were installed for preservation of the poles at the ground line.


OAKVILLE
TRAFALGAR TWP. (PART)
BRONTE
TRAFALGAR TWP. (PART)
BURLINGTON BEACH CANAL BRIDGE
2,200V.
NOTRE DAME ACADEMY
NATIONAL FIREPROOFING
11,000V.
44,000V.
BURLINGTON
WATERDOWN R.P.D. (PART)
GRANTHAM R.P.D. (PART)
ST. CATHARINES
HOMER
LOCK NO. 2
CORE OVEN
FIRESTONE
NATIONAL CAR
13,000V.
CAN. CRUSHED STONE, DUNDAS
STEEL CO. OF CAN.
11,000V
13,000V
26,800 HORSEPOWER
STEAM PLANT
CANNON
IRONDALE
VICTORIA
13,000V
JACKSON
CAN WEST CO
HAMILTON
BRANTFORD
SALTFLEET R.P.D. (PART)
DUNDAS ELECTRIC CO
2,400V
COCKSHUTT
ANCASTER
44,000V
BARTONVILLE
GRIMSBY
BEAMSVILLE
BEAMSVILLE R.P.D. (PART)
44,000V
SMITHVILLE
22,000V.
GUARD GATE
22,000V.
2,400V.
GRANTHAM R.P.D. (PART)
56,400 HORSEPOWER
DECEW FALLS
44,000V.
NIAGARA
10,000 HORSEPOWER
ST CATHARINES W. W
COOPER MILL
CANADIAN MEAD MORRISON
2,400V
STOKES RUBBER CO
22,000V
BEATTY, WELLAND
PLYMOUTH CORDAGE
SCOTTISH FERTILIZER
MAPLE LEAF MILLING CO
LOCK NO 8
LEGEND
GENERATING STATION ("HORSEPOWER" IS RATED ELECTRICAL HORSEPOWER AT RATED POWER FACTOR)
SWITCHING STATION
FREQUENCY CHANGER (IN TRANSFORMER STATION)
DISTRIBUTING STATION
MUNICIPAL OR CUSTOMER STATION
STATIONS & LINES IN SERVICE
STATIONS & LINES NOT COMMISSION'S PROPERTY
R.P.D. RURAL POWER DISTRICT

NIAGARA SYSTEM
DOMINION POWER AND TRANSMISSION DIVISION
(60 CYCLES)

DIAGRAM OF STATIONS
AS AT OCTOBER 31 1938

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO


TIE LINE TO GEORGIAN BAY SYSTEM AT HANOVER
ST. MARYS
STRATFORD
KITCHENER
PRESTON
GUELPH
COOKSVILLE
YORK
TORONTO
WILTSHIRE
STRACHAN
BRIDGMAN-DAVENPORT
LEASIDE
CHATS FALLS
106,800 HORSEPOWER
OTTAWA VALLEY POWER CO. 84000 H.P.
GATINEAU
MACLAREN, QUEBEC
220,000 V.
UNION NATURAL GAS
LA SALLE
AMHERSTBURG R.P.D. (PART)
SANDWICH R.P.D. (PART)
BELLE RIVER
AMHERSTBURG
HARROW
KINGSVILLE
LEAMINGTON
RIVERSIDE
ESSEX
CANADIAN INDUSTRIES
COMET
WALKERVILLE JCT.
CANADA STEEL CORPS
WINDSOR
MERLIN
RONDEAU
DRESDEN
RIDGETOWN
TILBURY
BLENHEIM
WALLACEBURG R.S.
WALLACEBURG
DOMINION SUGAR CO.
THAMESVILLE
BOTHWELL
CHATHAM
PORT STANLEY
ST. THOMAS
DUTTON
WEST LORNE
ST THOMAS
LONDON & PORT STANLEY RLY. 1500 V.D.C.
AYLMER
SHEDDEN
26,400 V.
13,200 V.
LONDON
WOODSTOCK
BRANT
DUNDAS
HAMILTON BEACH
HAMILTON STATION
WELLAND
MANNHEIM
KITCHENER
WATERLOO
NEW HAMBURG
BADEN
ELMIRA
ST JACOBS
WATERLOO R.S.
STRATFORD
SEAFORTH
MITCHELL
GODERICH
TAVISTOCK
LISTOWEL
PALMERSTON
MILVERTON
HARRISTON
DUBLIN
GEORGIAN BAY SYSTEM (TIE LINE) AT MOUNT FOREST
WALTON
MITCHELL
CLINTON
CLINTON R.S.
GODERICH
ST. MARYS
ST. MARYS CEMENT CO.
ST. MARYS
GUELPH R.S.
GUELPH
ONT. AGRICULTURAL COLLEGE
ONTARIO REFORMATORY
ACTON
GEORGETOWN
ROCKWOOD
FERGUS
ELORA
CHELTENHAM
INTERPROVINCIAL BRICK CO.
HESPELER
PRESTON
GALT
GALT PRESTON & HESPELER RLY.
PRESTON R.S.
CALEDONIA
DUNDAS R.S.
DECEWSVILLE
DUNDAS
WATERDOWN
LYNDEN
CAN. GYPSUM CO.
HAGERSVILLE
HAGERSVILLE QUARRIES
JARVIS
NATIONAL SEWER PIPE
BERTRAM & SONS
RYCKMAN
TORONTO
EAST YORK
NATIONAL STEEL CAR CO.
GEORGETOWN PROV. PAPER MILLS
TORONTO TWP. (RIFLE RANGES)
WESTON
WESTON (MOFFATS)
NEW TORONTO
GOODYEAR TIRE & RUBBER CO.
LONGBRANCH
ETOBICOKE TWP.
ALBION PARK
WOODBRIDGE
MIMICO
ISLINGTON
KLEINBURG
HORNBY
CANADIAN BROADCASTING CORPORATION
CLARKSON
TORONTO TWP.
BRAMPTON
MILTON
PORT CREDIT
STREETSVILLE
LONG BRANCH (RY. SUBSTATION)
CANADA SHALE BRICK CO.
HAMILTON
HAMILTON BEACH
VINEMOUNT
PORT NELSON
BURLINGTON STEEL
FRUITLAND
PORT COLBORNE
HUMBERSTONE
CANADA CEMENT CO.
GOV. GRAIN ELEVATOR
INTERNATIONAL NICKEL CO.
WEST HILL
SCARBORO TWP.
AGINCOURT
YORK MILLS
WILLOWDALE
NORTH YONGE
GREEN RIVER
MOUNT JOY
MARKHAM
RICHMOND HILL
AURORA
POTTAGEVILLE
NEWMARKET
SHARON
KESWICK
SUTTON
RINGWOOD
STOUFFVILLE
BEAVER DAMS
ST. CATHARINES
EXOLON CO.
LOUTH
BEAMSVILLE
JORDAN
INTERLAKE TISSUE MILLS CO.
GRIMSBY
GRIMSBY COLD STORAGE
MERRITTON
THOROLD
PROVINCIAL PAPER CO.
PORT DALHOUSIE
LINCOLN
INTERLAKE TISSUE
PROVINCIAL PAPER
PT. COLBORNE
60,000 V.
ONT. PAPER
THOROLD
QUEENSTON 533,000 HORSEPOWER
ONTARIO POWER 162,000 HORSEPOWER
110,000 V.
AMERICAN CYANAMID CO. 12,000 V.
CYANAMID
NIAGARA
ONT. POWER
TOR. POWER
20,000 HORSEPOWER CANADIAN NIAG. POWER CO.
110,000 HORSEPOWER ELECTRICAL DEVELOPMENT
ELECTRO METALLURGICAL CO.
WELLAND CUSTOMERS
CAN. STEEL FOUNDRIES
PAGE HERSEY CO.
EMPIRE COTTON
NIAGARA ON THE LAKE
N.F. CUSTOMERS
CAN. OHIO BRASS CO.
N.F. FILTRATION
AMERICAN CYANAMID CO.
CAN. RAMAPO IRON WORKS
QN. VICTORIA PARK N.F. COM.
NIAG. FALLS CITY
ST. DAVIDS
QUEENSTON
CHIPPAWA
STAMFORD TWP.
QUEENSTON QUARRY
NORTON CO.
LIONITE ABRASIVE
PORT ROBINSON
STD. STEEL CONST. CO. 2,300 & 220 V.
THOROLD CUSTOMERS
BEAVER WOOD FIBRE CO.
ONTARIO PAPER CO.
60,000 V. NIAG. LOCKPORT
UNION CARBIDE CO.
WELLAND
DUNNVILLE
CAN. ATLAS STEEL
45,000 V.
DASHWOOD
LONDON TRAFALGAR
DORCHESTER
LONDON ASYLUM
LUCAN
LONDON
THAMESFORD
STRATHROY
STRATHROY R.S.
EXETER
AILSA CRAIG
DELAWARE
ILDERTON
GLENDALE
BROUGHDALE
ESSEX
KENT
ST. THOMAS
ST. CLAIR
SARNIA BEACH
ALVINSTON
SARNIA
PETROLIA
PERCH
FOREST
WATFORD
OIL SPRINGS
BRIGDEN
DELHI
AYR
SIMCOE
WATERFORD
BURFORD
DRUMBO
PORT DOVER
LAKE ERIE & NORTHERN RY. (SIMCOE)
LAKE ERIE & NORTHERN RY. (BRANTFORD)
PARIS
BRANTFORD
ST. WILLIAMS
SERVICE BANK
MT. PLEASANT
WATERFORD SAND & GRAVEL CO.
SUPERIOR GRAVEL CO.
WOODSTOCK R.S.
WOODSTOCK
NORWICH
BEACHVILLE
INGERSOLL
EMBRO
TILLSONBURG
AMERICAN CYANAMID CO.
DUFFERIN CONSTRUCTION CO.
N. INGERSOLL
INGERSOLL R.P.D. (PART)
LEGEND
GENERATING STATION (HORSEPOWER IS RATED ELECTRICAL HORSEPOWER AT RATED POWER FACTOR)
TRANSFORMER STATION
DISTRIBUTING STATION
MUNICIPAL OR CUSTOMER STATION
STATIONS & LINES IN SERVICE
STATIONS & LINES NOT COMMISSION'S PROPERTY
R.P.D. RURAL POWER DISTRICT
AUTO TRANSFORMER STATION
FREQUENCY CHANGER STATION

NIAGARA SYSTEM

(25 CYCLES)

DIAGRAM OF STATIONS

AS AT OCTOBER 31, 1938

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES—1937-38

Municipality	Peak load in horsepower*		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Acton	985.0	977.3	7.7	
Agincourt	174.2	185.6		11.4
Ailsa Craig	117.8	126.0		8.2
Alvinston	94.2	97.6		3.4
Amherstburg	782.0	880.7		98.7
Ancaster Township	363.5	403.1		39.6
Arkona	61.6	62.0		0.4
Aurora	1,196.4	1,261.4		65.0
Aylmer	744.0	720.3	23.7	
Ayr	236.8	217.4	19.4	
Baden	376.4	350.6	25.8	
Beachville	552.1	481.7	70.4	
Beamsville	510.0	460.6	49.4	
Belle River	159.5	180.9		21.4
Blenheim	475.8	541.3		65.5
Blyth	115.9	119.1		3.2
Bolton	186.6	176.6	10.0	
Bothwell	148.1	136.7	11.4	
Brampton	2,705.3	2,952.7		247.4
Brantford	15,836.4	16,214.0		377.6
Brantford Township	741.9	790.8		48.9
Bridgeport	148.1	146.0	2.1	
Brigden	80.1	89.0		8.9
Bronte	205.1	192.3	12.8	
Brussels	144.3	144.3		
Burford	183.0	192.1		9.1
Burgessville	54.6	49.2	5.4	
Burlington	1,340.5	1,376.0		35.5
Burlington Beach		474.3		
Caledonia	332.0	412.8		80.8
Campbellville	34.1	35.1		1.0
Cayuga	130.0	140.4		10.4
Chatham	6,295.9	6,555.2		259.3
Chippawa	333.8	321.2	12.6	
Clifford	78.4	86.4		8.0
Clinton	571.0	614.7		43.7
Comber	176.9	167.5	9.4	
Cottam	74.4	84.3		9.9
Courtright	45.0	47.0		2.0
Dashwood	72.5	85.2		12.7
Delaware	65.0	73.7		8.7
Delhi		660.8		
Dorchester	110.9	126.4		15.5
Drayton	115.0	128.0		13.0
Dresden	372.5	396.8		24.3
Drumbo	83.1	99.7		16.6
Dublin	83.2	88.0		4.8
Dundas	1,931.9	1,959.1		27.2
Dunnville	1,144.1	1,193.1		49.0
Dutton	252.7	271.8		19.1

*See explanatory paragraphs on pages 7 and 10.

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES—1937-1938—Continued

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
East York Township	7,270.0	7,776.9		506.9
Elmira	729.3	807.6		78.3
Elora	369.6	397.0		27.4
Embro	139.4	152.5		13.1
Erieau	142.0	151.4		9.4
Erie Beach	44.5	51.2		6.7
Essex	642.1	643.5		1.4
Etobicoke Township	5,744.5	6,561.9		817.4
Exeter	562.2	557.6	4.6	
Fergus	1,243.3	1,273.4		30.1
Fonthill	152.0	146.1	5.9	
Forest	440.5	483.1		42.6
Forest Hill		7,994.6		
Galt	7,113.4	7,709.0		595.6
Georgetown	1,340.0	1,386.8		46.8
Glencoe	213.2	233.8		20.6
Goderich	1,292.2	1,308.7		16.5
Granton	60.0	75.7		15.7
Grimsby	710.0	1,040.0		330.0
Guelph	9,687.0	10,223.2		536.2
Hagersville	978.5	810.7	167.8	
Hamilton	110,465.0	104,000.0	6,465.0	
Harriston	346.9	398.9		52.0
Harrow	573.4	542.6	30.8	
Hensall	202.6	178.1	24.5	
Hespeler	2,098.8	2,044.0	54.8	
Highgate	73.0	82.8		9.8
Humberstone	469.3	480.4		11.1
Ingersoll	2,407.4	2,470.4		63.0
Jarvis	208.4	205.9	2.5	
Kingsville	593.8	683.6		89.8
Kitchener	20,601.7	21,053.7		452.0
Lambeth	136.0	149.2		13.2
La Salle	229.3	262.0		32.7
Leamington	2,217.8	2,930.9		713.1
Listowel	1,045.5	1,136.7		91.2
London	37,358.8	38,517.6		1,158.8
London Township	585.5	596.5		11.0
Long Branch	933.0	1,120.6		187.6
Lucan	226.6	230.4		3.8
Lynden	89.8	105.3		15.5
Markham	365.3	359.2	6.1	
Merlin	89.9	85.3	4.6	
Merritton	5,834.0	5,819.3	14.7	
Milton	1,261.7	1,124.7	137.0	
Milverton	312.7	347.1		34.4
Mimico	2,635.3	2,827.0		191.7
Mitchell	518.2	602.5		84.3
Moorefield	31.9	37.8		5.9
Mount Brydges	113.6	108.4	5.2	

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES—1937-1938—Continued

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Newbury	46.9	39.9	7.0	
New Hamburg	546.7	587.8		41.1
Newmarket	1,714.5	1,695.8	18.7	
New Toronto	7,042.8	7,148.8		106.0
Niagara Falls	10,088.2	10,134.0		45.8
Niagara-on-the-Lake	769.4	765.4	4.0	
North York Township	4,406.0	5,074.4		668.4
Norwich	389.4	409.6		20.2
Oakville	1,147.4	1,093.8	53.6	
Oil Springs	195.7	222.1		26.4
Otterville	128.6	120.3	8.3	
Palmerston	465.9	487.6		21.7
Paris	1,319.2	1,376.8		57.6
Parkhill	162.3	183.4		21.1
Petrolia	1,103.9	1,119.0		15.1
Plattsville	93.1	89.1	4.0	
Point Edward	1,162.2	1,302.9		140.7
Port Colborne	2,069.6	2,176.9		107.3
Port Credit	808.8	847.7		38.9
Port Dalhousie	927.6	922.2	5.4	
Port Dover	439.2	416.4	22.8	
Port Rowan	74.7	86.9		12.2
Port Stanley	950.5	1,007.0		56.5
Preston	3,039.6	3,173.5		133.9
Princeton	162.2	129.4	32.8	
Queenston	115.3	137.2		21.9
Richmond Hill	428.4	444.8		16.4
Ridgetown	541.1	571.0		30.1
Riverside	1,032.4	1,116.9		84.5
Rockwood	118.0	122.6		4.6
Rodney	153.8	185.4		31.6
St. Catharines	13,694.8	14,673.8		979.0
St. Clair Beach	103.8	111.2		7.4
St. George	170.2	162.9	7.3	
St. Jacobs	313.6	327.0		13.4
St. Marys	1,361.0	1,461.6		100.6
St. Thomas	7,761.4	8,024.1		262.7
Sarnia	8,623.6	8,990.9		367.3
Scarboro Township	3,796.5	4,113.9		317.4
Seaforth	568.1	558.1	10.0	
Simcoe	2,290.9	2,250.7	40.2	
Smithville	332.7	414.2		81.5
Springfield	70.3	67.3	3.0	
Stamford Township	2,317.7	2,472.6		154.9
Stoney Creek	227.3	229.4		2.1
Stouffville	252.5	284.1		31.6
Stratford	7,123.4	7,591.5		468.1
Strathroy	1,194.3	1,215.8		21.5
Streetsville	134.0	163.5		29.5
Sutton	353.5	441.3		87.8

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES—1937-1938—Concluded

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Swansea	2,949.1	2,990.6	....	41.5
Tavistock	605.9	678.2	....	72.3
Tecumseh	433.7	464.3	....	30.6
Thamesford	188.3	209.3	....	21.0
Thamesville	213.1	249.0	....	35.9
Thedford	136.0	129.0	7.0	....
Thorndale	50.1	111.4	....	61.3
Thorold	2,389.2	2,283.0	106.2	....
Tilbury	562.3	709.9	....	147.6
Tillsonburg	1,383.9	1,441.1	....	57.2
Toronto	351,802.9	362,158.2	....	10,355.3
Toronto Township	2,355.1	2,549.5	....	194.4
Trafalgar Township Area No. 1	397.3	467.8	....	70.5
Trafalgar Township Area No. 2	113.3	145.5	....	32.2
Wallaceburg	2,281.4	2,584.2	....	302.8
Wardsville	35.5	38.2	....	2.7
Waterdown	247.1	256.3	....	9.2
Waterford	451.7	441.0	10.7	....
Waterloo	3,612.6	3,978.5	....	365.9
Watford	264.7	292.2	....	27.5
Welland	5,967.8	5,917.9	49.9	....
Wellesley	113.5	129.7	....	16.2
West Lorne	132.6	137.6	....	5.0
Weston	3,790.8	4,021.4	....	230.6
Wheatley	162.4	165.5	....	3.1
Windsor	40,756.3	40,043.5	712.8	....
Woodbridge	440.3	447.7	....	7.4
Woodstock	6,348.3	6,605.9	....	257.6
Wyoming	80.4	165.5	....	85.1
Zurich	96.1	102.4	....	6.3

NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS—1937-1938

Rural power district	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Acton	18.0	20.0	....	2.0
Ailsa Craig	8.6	33.9	....	25.3
Alvinston	9.6	14.4	....	4.8
Amherstburg	1,152.5	1,025.0	127.5	....
Aylmer	521.5	757.7	....	236.2
Ayr	51.0	55.5	....	4.5
Baden	678.3	657.2	....	21.1
Beamsville	1,504.4	1,745.2	....	240.8
Belle River	413.2	426.2	....	13.0
Blenheim	232.1	311.8	....	79.7

NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS—1937-1938—Continued

Rural power district	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Bond Lake	1,500.5	1,639.9		139.4
Bothwell	259.0	363.1		104.1
Brampton	241.0	292.3		51.3
Brant	770.5	942.3		171.8
Brigden	55.3	87.9		32.6
Burford	233.7	273.2		39.5
Caledonia	530.4	636.1		105.7
Chatham	698.7	890.8		192.1
Chippawa	177.6	186.2		8.6
Clinton	203.2	261.4		58.4
Delaware	490.3	559.2		68.9
Dorchester	550.4	629.1		78.7
Dresden	91.6	140.7		49.1
Drumbo	229.8	281.1		51.3
Dundas	865.7	1,030.1		164.4
Dunnville	63.0	117.5		54.5
Dutton	181.3	220.2		38.9
Elmira	132.8	132.3	0.5	
Elora	185.2	188.2		3.0
Essex	367.4	416.6		49.2
Exeter	648.8	755.7		106.9
Forest	94.8	129.2		34.4
Galt	305.1	330.0		24.9
Georgetown	210.0	244.3		34.3
Goderich	155.7	200.6		44.9
Grantham	683.4	667.6	15.8	
Guelph	636.9	696.2		59.3
Haldimand	411.4	459.2		47.8
Harriston	42.2	50.7		8.5
Harrow	974.2	1,053.9		79.7
Ingersoll	624.8	688.9		64.1
Jordan	482.0	440.8	41.2	
Keswick	1,351.6	1,487.5		135.9
Kingsville	1,185.7	1,312.4		126.7
Listowel	305.6	351.2		45.6
London	2,386.2	2,577.0		190.8
Lucan	134.6	136.9		2.3
Lynden	236.9	268.3		31.4
Markham	751.9	871.0		119.1
Merlin	287.6	309.4		21.8
Milton	246.6	264.6		18.0
Milverton	138.6	166.2		27.6
Mitchell	264.5	352.5		88.0
Newmarket	414.7	461.7		47.0
Niagara	814.2	899.2		85.0
Norwich	478.3	651.6		173.3
Oil Springs	66.5	98.2		31.7
Palmerston	111.5	132.3		20.8
Petrolia	47.5	70.9		23.4
Preston	1,332.9	1,677.5		344.6

NIAGARA SYSTEM—RURAL POWER DISTRICT LOADS—1937-1938—Concluded

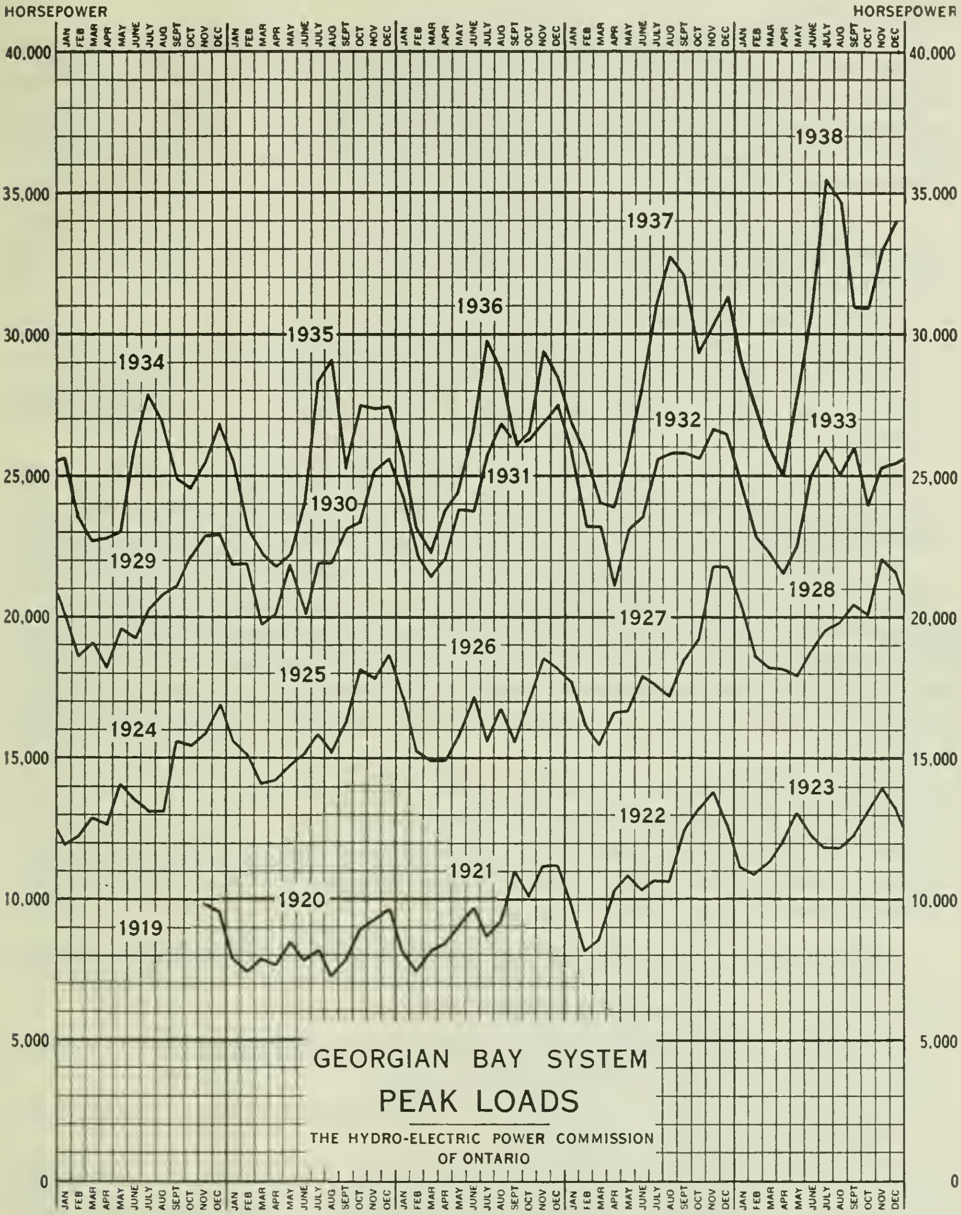
Rural power district	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Ridgetown	580.8	605.3	....	24.5
St. Jacobs	340.2	372.6	....	32.4
St. Marys	422.7	561.9	....	139.2
St. Thomas	943.6	1,107.6	....	164.0
Saltfleet	1,269.8	1,529.0	....	259.2
Sandwich	1,354.3	1,487.1	....	132.8
Sarnia	978.1	1,028.3	....	50.2
Scarboro	652.7	781.0	....	128.3
Seaforth	75.7	84.3	....	8.6
Simcoe	442.0	609.0	....	167.0
Stamford	275.3	295.1	....	19.8
Stratford	284.8	317.1	....	32.3
Strathroy	186.0	232.0	....	46.0
Streetsville	496.0	566.8	....	70.8
Tavistock	344.2	417.0	....	72.8
Thamesville	204.4	235.0	....	30.6
Tilbury	391.4	300.3	91.1	....
Tillsonburg	566.3	724.5	....	158.2
Wallaceburg	334.4	384.3	....	49.9
Walsingham	627.6	722.4	....	94.8
Walton	174.8	207.6	....	32.8
Waterdown	1,416.0	1,504.2	....	88.2
Waterford	358.8	445.7	....	86.9
Watford	66.8	88.7	....	21.9
Welland	1,603.9	1,760.2	....	156.3
Woodbridge	893.5	1,084.2	....	190.7
Woodstock	863.4	1,064.6	....	201.2

GEORGIAN BAY SYSTEM

Operation

The Georgian Bay system peak load was approximately eight per cent, and the energy distributed approximately five per cent, in excess of last year. The additional energy requirements were more than taken care of by increased output of the three plants on the South Muskoka river made possible by greater flows in this river than in the previous year, combined with the fact that increased output could be used advantageously because of the increase in capacity of the Eugenia-Severn tie line recorded in last year's Report. The result was a decrease of about eight per cent in energy transferred from the Niagara system by way of Hanover and Mount Forest frequency-changer sets. The outputs of other hydraulic plants within the system were about the same as last year.

Power was purchased from the Orillia Water, Light and Power Commission in July and August over peak-load periods as the resources otherwise available



NOTE:—The Georgian Bay system includes the Severn, Eugenia, Wasdells, Muskoka and Bala districts. In the diagram the load for the Muskoka district is not included until November, 1924. Details respecting this load for preceding years are given in earlier annual reports. The load o fthe Bala district is not included in above graph until April, 1931, previous meter records being incomplete.

were unable to supply the peak demands; the yearly peaks occurred in these two months as has been the case for the last few years in this system. Small amounts of power were supplied to the Orillia Commission on two occasions to facilitate the handling of maintenance work.

Maintenance

At Eugenia generating station the No. 3 machine bearings were overhauled and the unit realigned. The synchronous condenser was overhauled, hardwood wedges tightened, eight broken starting bars replaced, loose insulating collars on pole pieces tightened and the unit painted. Extensive repairs to the concrete of Eugenia storage basin dam were carried out by the Construction department.

At Hanover generating station the field-pole insulating collars on both machines, which had deteriorated and become loose, were replaced and the units cleaned and painted.

At Big Chute generating station the No. 1 generator rotor was found to have shifted on the shaft and repairs were made by removing the shaft, truing the bore of the rotor hub, inserting a shim, shrinking the hub on the shaft and realigning the machine. Defective timbers in No. 1 and No. 2 headgates were replaced.

At Wasdells generating station the beam and deck slab over each of two sluiceways was renewed, broken concrete repaired and the deck of the dam waterproofed with a mixture made up of cement, sand and emulsified asphalt.

At Trethewey Falls generating station the turbine was inspected and repairs made to prevent rubbing of the gates on the crown plate. Repairs to the dam were carried out by the Construction department. These were necessary to correct damage caused by frost action and consisted of the removal of the easterly 55 feet, preparation of foundation and replacement with a new concrete section, provision of proper drainage of the new section and placing of rock fill.

At Bala No. 1 generating station there was one case of failure of armature coil insulation and seven coils were replaced.

At Bala No. 2, Walkerton, South Falls and Hanna Chute generating stations, and at Hanover and Mount Forest frequency-changer stations only routine inspection and repairs were required.

At Hollow Lake dam the masonry was repointed, joint sealing compound on the deck of the dam was renewed, the deck of the dam waterproofed and stop logs given a preservative treatment with creosote oil.

At Chesley distributing station a 250-kv-a. transformer failed in service and was returned to the manufacturer for repairs.

At Durham distributing station obsolete lightning arresters on the Durham and Holstein feeders were replaced.

At Meaford distributing station on December 2 a fire, which was apparently caused by break-down of low-voltage current transformers, destroyed or damaged considerable equipment and wiring around the switchboard. Service was restored by means of temporary connections and the damaged portion of the station was rehabilitated.

At Penetang distributing station one 300-kv-a. transformer failed in service and was shipped to the manufacturer for repairs.

At Pinedale distributing station the distribution voltage was raised from 4,000 to 8,000 volts.

At Wasdells rural station the distribution voltage was raised from 4,000 to 8,000 volts.

Eleven municipalities were assisted with the operation and maintenance of their distribution systems on twenty-eight occasions.

Three major transmission line breaks occurred during the year as a result of very high winds; on December 26, ten consecutive poles were broken between Dundalk and Shelburne; April 28, sixteen consecutive poles were broken between Elmvale and Fergusonvale; July 14, two 2-pole structures were blown down on the Muskoka-Severn tie line.

To improve telephone communication, power-circuit transpositions were relocated between Eugenia generating station and Hanover, and 165 hand joints in the telephone line from Eugenia generating station to Collingwood were replaced with compression type joints.

Thirty-five storm guys were erected in the line between Markdale and Owen Sound.

Between Barrie and Bradford junction the ground wire was removed and conductors rearranged to give wider separation.

The power and telephone conductors along nearly one mile of the Muskoka-Wasdells tie line were replaced with new conductors as the old cables had been badly damaged by blasting operations of the highway contractors.

Owing to highway changes extensive re-routing of the transmission line was required between Berkeley and Chatsworth. At the request of the Bell Telephone Company new poles were erected and other changes made at crossings over the telephone line between Barrie and Painswick, also near Shelburne and near Greenbank.

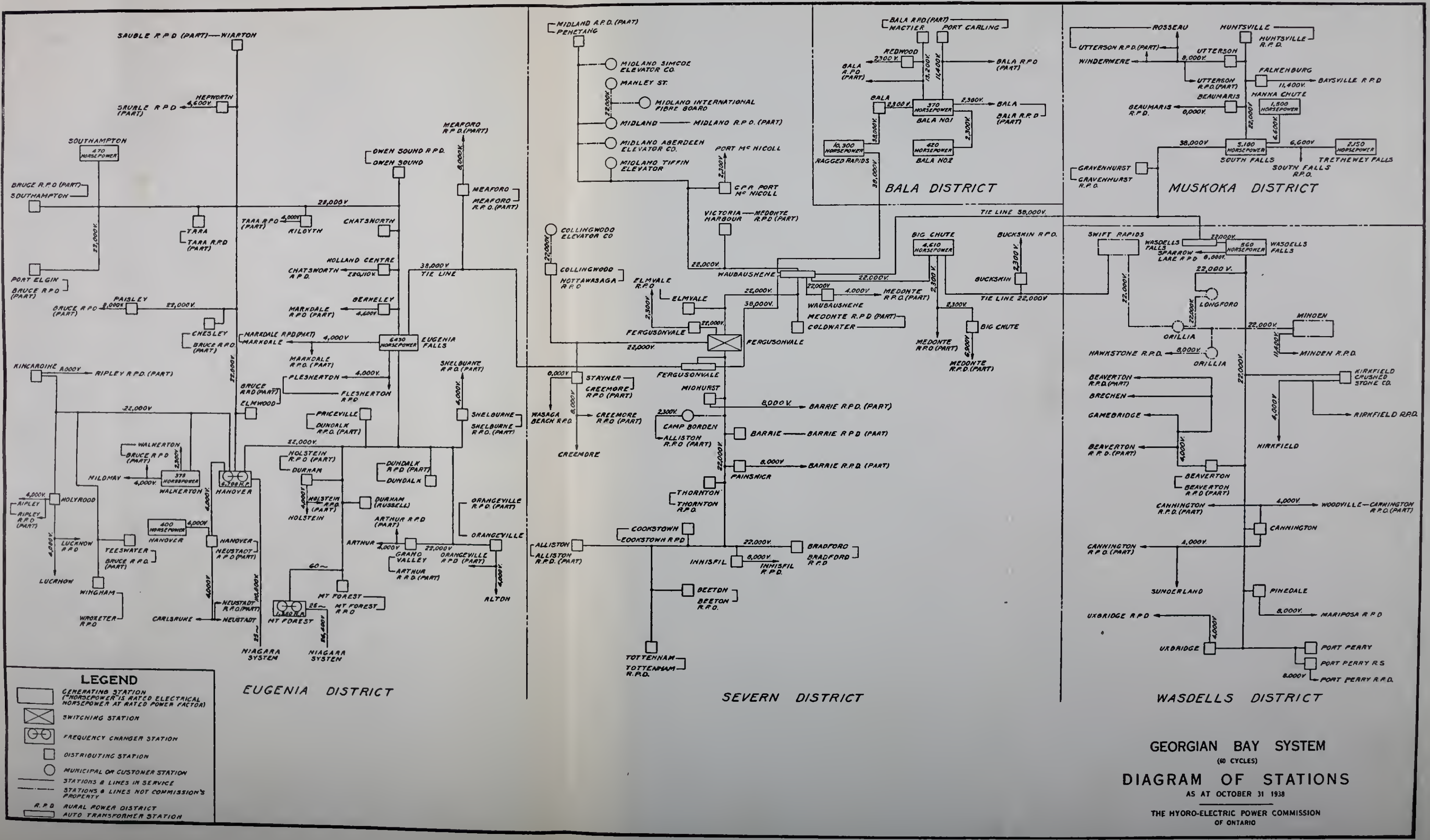
In addition to routine patrol and maintenance, 425 poles were replaced, 575 poles were reinforced by the addition of stubs or the installation of split cylinders, 60 poles were lowered and 4,400 poles received preservative treatment at the ground line by the application of sand-creosote collars. Approximately 700 defective crossarms, 2,200 defective insulators and 1,500 defective insulator pins were replaced.

GEORGIAN BAY SYSTEM—LOADS OF MUNICIPALITIES—1937-1938

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Alliston	313.1	330.3	....	17.2
Arthur	159.0	170.3	....	11.3
Bala	282.0	309.0	....	27.0
Barrie	2,894.4	3,067.2	....	172.8
Beaverton	248.8	289.5	....	40.7
Beeton	114.0	113.2	0.8	....
Bradford	213.7	196.6	17.1	....
Brechin	68.1	87.3	....	19.2
Cannington	182.2	181.2	1.0	....
Carlsruhe	5.0	5.0	....	....
Chatsworth	74.1	77.6	....	3.5
Chesley	520.7	574.8	....	54.1
Coldwater	345.9	330.9	15.0	....
Collingwood	1,606.7	1,694.4	....	87.7
Cookstown	77.4	93.7	....	16.3

GEORGIAN BAY SYSTEM—LOADS OF MUNICIPALITIES—1937-1938—Concluded

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Creemore	113.6	134.0	....	20.4
Dundalk	208.6	218.7	....	10.1
Durham	492.5	509.2	....	16.7
Elmvale	183.2	166.2	17.0	....
Elmwood	70.5	64.0	6.5	....
Flesherton	88.3	80.8	7.5	....
Grand Valley	130.1	147.2	....	17.1
Gravenhurst	906.8	1,011.6	....	104.8
Hanover	1,160.2	1,135.6	24.6	....
Hepworth	31.9	29.0	2.9	....
Holstein	19.5	21.8	....	2.3
Huntsville	1,055.4	1,134.5	....	79.1
Kincardine	719.1	746.6	....	27.5
Kirkfield	27.0	27.0	....	....
Lucknow	307.2	280.4	26.8	....
MacTier	149.0	149.0	....	....
Markdale	193.1	188.2	4.9	....
Meaford	662.9	766.8	....	103.9
Midland	3,031.8	3,131.8	....	100.0
Mildmay	115.6	124.8	....	9.2
Mount Forest	478.5	573.3	....	94.8
Neustadt	41.1	39.1	2.0	....
Orangeville	678.8	695.5	....	16.7
Owen Sound	4,130.3	4,380.0	....	249.7
Paisley	141.0	134.7	6.3	....
Penetang	809.4	767.0	42.4	....
Port Carling	223.0	302.0	....	79.0
Port Elgin	405.3	454.0	....	48.7
Port McNicoll	89.6	90.4	....	0.8
Port Perry	274.4	307.7	....	33.3
Priceville	17.0	16.6	0.4	....
Ripley	64.5	77.0	....	12.5
Rosseau	56.8	63.3	....	6.5
Shelburne	236.2	248.1	....	11.9
Southampton	374.6	435.7	....	61.1
Stayner	258.6	311.6	....	53.0
Sunderland	78.5	81.3	....	2.8
Tara	107.4	108.8	....	1.4
Teeswater	145.4	149.6	....	4.2
Thornton	28.1	30.5	....	2.4
Tottenham	78.3	85.7	....	7.4
Uxbridge	300.3	297.0	3.3	....
Victoria Harbour	74.4	75.0	....	0.6
Walkerton	805.0	732.6	72.4	....
Waubaushene	137.9	138.7	....	0.8
Wiarton	306.2	320.7	....	14.5
Windermere	92.3	96.9	....	4.6
Wingham	429.5	487.2	....	57.7
Woodville	72.8	88.8	....	16.0


EUGENIA DISTRICT
SEVERN DISTRICT
BALA DISTRICT
MUSKOKA DISTRICT
WASDELLS DISTRICT
SAUBLE R.P.D. (PART) — WIARTON
HEPWORTH
SAUBLE R.P.D. (PART)
4,600V
SOUTHAMPTON
470 HORSEPOWER
BRUCE R.P.D. (PART)
SOUTHAMPTON
22,000V
PORT ELGIN
BRUCE R.P.D. (PART)
TARA
TARA R.P.D. (PART)
TARA R.P.D. (PART)
4,000V
KILSYTH
CHATSWORTH
HOLLAND CENTRE
CHATSWORTH R.P.D.
220/110V
BERKELEY
MARKDALE R.P.D. (PART)
4,600V
OWEN SOUND R.P.D.
OWEN SOUND
MEAFORD R.P.D. (PART)
8,000V
MEAFORD
MEAFORD R.P.D. (PART)
38,000V TIE LINE
PAISLEY
BRUCE R.P.D. (PART)
8,000V
CHESLEY
BRUCE R.P.D. (PART)
MARKDALE R.P.D. (PART)
MARKDALE
4,000V
6430 HORSEPOWER
EUGENIA FALLS
MARKDALE R.P.D. (PART)
FLESHERTON
4,000V
FLESHERTON R.P.D.
BRUCE R.P.D. (PART)
ELMWOOD
SHELBURNE R.P.D. (PART)
4,000V
SHELBURNE
SHELBURNE R.P.D. (PART)
PRICEVILLE
DUNDALK R.P.D. (PART)
KINCARDINE
8,000V
RIPLEY R.P.D. (PART)
22,000V
WALKERTON
BRUCE R.P.D. (PART)
2,300V
MILDMAY
4,000V
378 HORSEPOWER
WALKERTON
6,700 H.P.
HANOVER
HOLSTEIN R.P.D. (PART)
DURHAM
DUNDALK R.P.D. (PART)
DUNDALK
4,000V
RIPLEY
RIPLEY R.P.D. (PART)
HOLYROOD
4,000V
LUCKNOW R.P.D.
LUCKNOW
TEESWATER
BRUCE R.P.D. (PART)
WINGHAM
WROXETER R.P.D.
400 HORSEPOWER
HANOVER
HANOVER
NEUSTADT R.P.D. (PART)
NEUSTADT R.P.D. (PART)
NEUSTADT
CARLSRUHE
26,000V
25~
NIAGARA SYSTEM
HOLSTEIN R.P.D. (PART)
HOLSTEIN
DURHAM (RUSSELL)
ARTHUR R.P.D. (PART)
ARTHUR
4,000V
GRAND VALLEY
ARTHUR R.P.D. (PART)
ORANGEVILLE R.P.D. (PART)
ORANGEVILLE R.P.D. (PART)
ORANGEVILLE
ALTON
60~
1,360 H.P.
MT FOREST
MT FOREST
MT FOREST R.P.D.
25~
26,400V
NIAGARA SYSTEM
MIDLAND R.P.D. (PART)
PENETANG
MIDLAND SIMCOE ELEVATOR CO.
MANLEY ST.
MIDLAND INTERNATIONAL FIBRE BOARD
MIDLAND — MIDLAND R.P.D. (PART)
MIDLAND ABERDEEN ELEVATOR CO.
MIDLAND TIFFIN ELEVATOR
PORT MC NICOLL
2,300V
C.P.R. PORT MC NICOLL
VICTORIA HARBOUR — MEDONTE R.P.D. (PART)
COLLINGWOOD ELEVATOR CO
COLLINGWOOD
NOTTAWASAGA R.P.D.
ELMVALE R.P.D.
ELMVALE
2,300V
FERGUSONVALE
FERGUSONVALE
FERGUSONVALE
WAUBAUSHENE
WAUBAUSHENE
22,000V
38,000V
4,000V
MEDONTE R.P.D. (PART)
MEDONTE R.P.D. (PART)
COLDWATER
STAYNER
CREEMORE R.P.D. (PART)
8,000V
WASAGA BEACH R.P.D.
CREEMORE R.P.D. (PART)
CREEMORE
MIDHURST
8,000V
BARRIE R.P.D. (PART)
2,300V
CAMP BORDEN
ALLISTON R.P.D. (PART)
BARRIE — BARRIE R.P.D. (PART)
PAINSWICK
BARRIE R.P.D. (PART)
THORNTON
THORNTON R.P.D.
COOKSTOWN
COOKSTOWN R.P.D.
ALLISTON
ALLISTON R.P.D. (PART)
INNISFIL
INNISFIL R.P.D.
BRADFORD
BRADFORD R.P.D.
BEETON
BEETON R.P.D.
TOTTENHAM
TOTTENHAM R.P.D.
BALA R.P.D. (PART)
MACTIER
PORT CARLING
REDWOOD
2300V
BALA R.P.D. (PART)
13,200V
11,400V
BALA R.P.D. (PART)
BALA
2,300V
370 HORSEPOWER
BALA NO.1
BALA
BALA R.P.D. (PART)
10,300 HORSEPOWER
RAGGED RAPIDS
420 HORSEPOWER
BALA NO.2
TIE LINE 38,000V
BIG CHUTE
4,610 HORSEPOWER
BUCKSKIN R.P.D.
BUCKSKIN
TIE LINE 22,000V
MEDONTE R.P.D. (PART)
BIG CHUTE
6,900V
MEDONTE R.P.D. (PART)
ROSSEAU
HUNTSVILLE
HUNTSVILLE R.P.D.
UTTERSON R.P.D. (PART)
WINDERMERE
UTTERSON
8,000V
UTTERSON R.P.D. (PART)
FALKENBURG
11,400V
BAYSVILLE R.P.D.
BEAUMARIS
BEAUMARIS R.P.D.
HANNA CHUTE
1,500 HORSEPOWER
6,600V
38,000V
5,100 HORSEPOWER
SOUTH FALLS
2,150 HORSEPOWER
TRETHEWEY FALLS
SOUTH FALLS R.P.D.
GRAVENHURST
GRAVENHURST R.P.D.
SWIFT RAPIDS
WASDELLS FALLS
560 HORSEPOWER
WASDELLS FALLS
SPARROW LAKE R.P.D.
LONGFORD
ORILLIA
ORILLIA
MINDEN
MINDEN R.P.D.
HAWKSTONE R.P.D.
KIRKFIELD CRUSHED STONE CO.
KIRKFIELD R.P.D.
KIRKFIELD
BEAVERTON R.P.D. (PART)
BRECHIN
GAMEBRIDGE
BEAVERTON R.P.D. (PART)
BEAVERTON
BEAVERTON R.P.D. (PART)
CANNINGTON R.P.D. (PART)
WOODVILLE — CANNINGTON R.P.D. (PART)
CANNINGTON
CANNINGTON R.P.D. (PART)
SUNDERLAND
PINEDALE
MARIPOSA R.P.D.
UXBRIDGE R.P.D.
UXBRIDGE
PORT PERRY
PORT PERRY R.S.
PORT PERRY R.P.D.
LEGEND
GENERATING STATION ("HORSEPOWER" IS RATED ELECTRICAL HORSEPOWER AT RATED POWER FACTOR)
SWITCHING STATION
FREQUENCY CHANGER STATION
DISTRIBUTING STATION
MUNICIPAL OR CUSTOMER STATION
STATIONS & LINES IN SERVICE
STATIONS & LINES NOT COMMISSION'S PROPERTY
R.P.D. RURAL POWER DISTRICT
AUTO TRANSFORMER STATION

GEORGIAN BAY SYSTEM

(60 CYCLES)

DIAGRAM OF STATIONS

AS AT OCTOBER 31 1938

THE HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO

GEORGIAN BAY SYSTEM—RURAL POWER DISTRICT LOADS—1937-1938

Rural power district	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Alliston	141.6	149.5	....	7.9
Arthur	4.8	12.0	....	7.2
Bala	400.0	391.0	9.0	....
Barrie	610.5	678.5	....	68.0
Baysville	182.5	183.2	....	0.7
Beaumaris	599.8	639.4	....	39.6
Beaverton	353.2	370.1	....	16.9
Beeton	5.0	5.0	....	....
Bradford	79.6	96.1	....	16.5
Bruce	245.0	327.0	....	82.0
Buckskin	22.6	25.7	....	3.1
Cannington	68.3	100.6	....	32.3
Chatsworth	11.4	12.6	....	1.2
Cookstown	3.0	2.5	0.5	....
Creemore	89.0	123.6	....	34.6
Dundalk	15.0	34.5	....	19.5
Elmvale	106.4	138.5	....	32.1
Flesherton	36.5	53.9	....	17.4
Gravenhurst	65.2	103.0	....	37.8
Hawkestone	209.1	227.8	....	18.7
Holstein	3.0	5.8	....	2.8
Huntsville	241.4	269.6	....	28.2
Innisfil	670.2	809.6	....	139.4
Kirkfield	24.2	34.0	....	9.8
Lucknow	12.0	18.5	....	6.5
Mariposa	227.3	233.2	....	5.9
Markdale	51.9	55.0	....	3.1
Meaford	25.0	134.2	....	109.2
Medonte	126.0	195.7	....	69.7
Midland	285.1	420.0	....	134.9
Minden	56.3	89.8	....	33.5
Neustadt	3.5	8.3	....	4.8
Nottawasaga	40.8	58.3	....	17.5
Orangeville	93.3	137.8	....	44.5
Owen Sound	100.0	134.6	....	34.6
Port Perry	227.2	241.3	....	14.1
Ripley	41.5	98.4	....	56.9
Sauble	73.2	115.8	....	42.6
Shelburne	38.0	42.7	....	4.7
South Falls	6.0	9.0	....	3.0
Sparrow Lake	297.8	326.5	....	28.7
Tara	120.1	120.0	0.1	....
Thornton	18.9	22.3	....	3.4
Tottenham	10.0	16.5	....	6.5
Utterson	165.9	229.7	....	63.8
Uxbridge	137.3	150.7	....	13.4
Wasaga Beach	598.9	742.6	....	143.7
Wroxeter	163.3	183.7	....	20.4

EASTERN ONTARIO SYSTEM

Operation

The load on the Eastern Ontario system was well sustained throughout the past fiscal year. The monthly primary peaks and average loads have, without exception, exceeded all recorded maxima for corresponding months in any year. The maximum primary peak increased 2.5 per cent and the total primary kilowatt-hours increased 5.9 per cent.

The system primary peak for the fiscal year usually occurs during the month of October, load growth exceeding seasonal variations. In the present year, the load has followed the more or less characteristic trend, but from a survey of the operating records there are indications of a slowing down of industrial activities, starting about the middle of October and continuing until the end of the calendar year. In consequence of this the increase in peak demand for the month of October was approximately 4 per cent less than the average rate of increase for the previous eleven months.

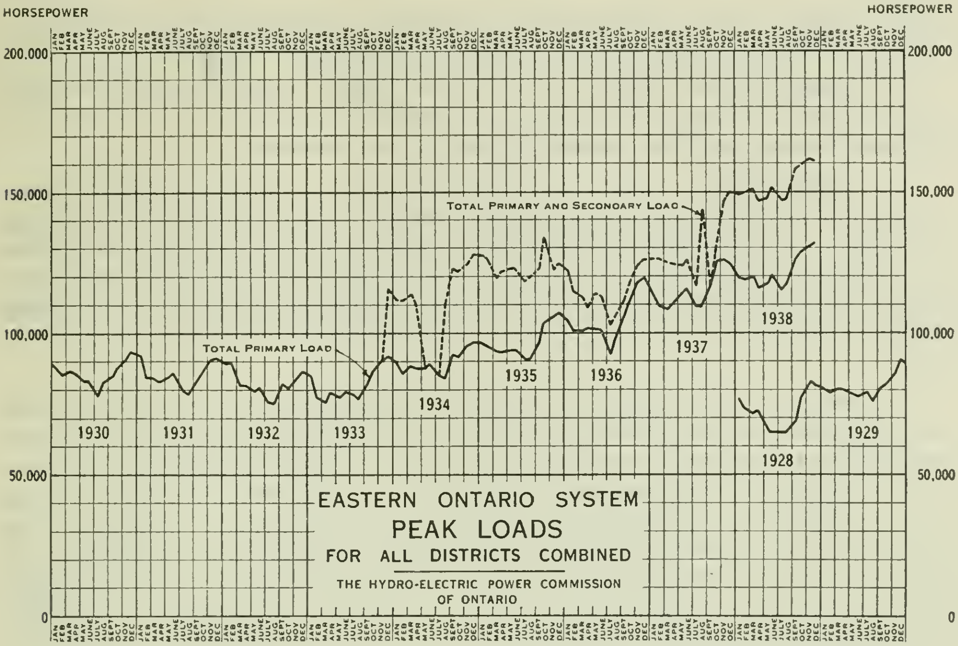
By arrangements with the Gatineau Power Company, it was possible during the year to transfer certain amounts of surplus energy available on the Niagara system to the Eastern Ontario system. This transfer is effected by increasing the 60-cycle contract delivery with a corresponding reduction on the 25-cycle contract at no additional cost to the Commission. As a result of this transfer, together with surplus energy available from the Eastern Ontario system generating and purchased sources, it was possible to deliver secondary power to the extent of approximately 150,000,000 kilowatt-hours to the steam generator at the Howard Smith Paper Mills at Cornwall.

Under the terms of the revised 60-cycle contract with the Gatineau Power Company, an additional 18,000 horsepower became available on October 1, thereby making available to this system the maximum contract amount of 60,000 horsepower.

Service to all customers in Prince Edward county was greatly improved, particularly with regard to voltage conditions, by the replacement of the old iron conductor with aluminum, steel-reinforced conductor on the line known as the Picton Tap. This line is approximately 28 miles in length and extends from the main 44,000-volt line some four miles west of Trenton to Picton. The above work was completed on November 26, 1937.

In order to improve general operating conditions and provide increased service security to the town of Lindsay, a second 44,000-volt circuit was constructed between Auburn switching station and Lindsay Junction. The old 44,000-volt line extending between Auburn switching station and Lindsay distributing station was completely rehabilitated. This work was completed by November 26, 1937, and the new section of line was placed in service on January 5.

Stream flow on the Trent river was uniformly satisfactory throughout the year. Rainfall was considerably above normal during the months of July, August and September, which are usually the months of lowest stream flow. As a result it was possible to operate the generating stations at a somewhat higher load factor than usual during these months.



Maintenance

During the year the usual programme of general plant inspection and maintenance was carried out. A number of turbines were unwatered and inspected, and necessary repairs and adjustments made. The governors in the various plants were inspected and adjusted. Several of the forebays were unwatered, racks cleaned, sunken debris removed, and the concrete carefully inspected. Lightning arresters were overhauled during the winter season.

High-tension oil breakers were inspected and overhauled in accordance with the number of times they had operated under trouble conditions.

Defective high-tension bushings were replaced in a number of oil breakers and transformers. A number of defective insulators were replaced on the high-tension bus structures at several stations. Painting of buildings, structures and apparatus was carried out at numerous places throughout the system. Further details are given below regarding the maintenance of various stations and lines.

At Sidney, plant No. C-2, all turbines were inspected and defective bearings were replaced in each unit. The governors were thoroughly overhauled. The lower sections of the racks were inspected and cleaned by a diver. All generators were thoroughly overhauled. A new telephone switchboard was installed.

At Frankford, plant No. C-5, the forebay was unwatered and the racks cleaned. All turbines were unwatered, lignum-vitae bearings were adjusted and a number of broken gates were replaced.

At Meyersburg, plant No. C8, all turbines were inspected but no major repairs were found necessary. The five 44,000-volt oil breakers were overhauled, three defective high-tension bushings were replaced. A defective current transformer was replaced on one of the 44,000-volt lines.

At Hagues Reach, plant No. C-9, the turbines were all unwatered and necessary repairs and adjustments were made. All 44,000-volt oil breakers were overhauled, two high-tension bushings were replaced.

At Ranney Falls, plant No. C-10, the forebay was unwatered, racks cleaned and the head gates cleaned and painted. One turbine was thoroughly overhauled. One generator was completely overhauled and new air-slide wedges were installed in the stator for the purpose of improving cooling conditions. The 44,000-volt oil breakers and the electrolytic lightning arresters were overhauled. A defective current transformer was replaced on one of the 44,000-volt lines.

At Seymour, plant No. C-11, the forebay was unwatered and the racks were cleaned. Two of the main turbines and the exciter turbine were overhauled. Three of the governors were overhauled. The 44,000-volt oil breakers were overhauled on two occasions. As a result of a severe electrical storm on May 5, two 750-kv-a, 2,400-volt generators were seriously damaged. One generator was returned to service temporarily following the replacement of approximately fifty stator coils, and other miscellaneous repairs. The second machine required a complete overhaul, including the supply and installation of a complete new stator winding, new collars for the field poles and restacking the iron laminations, etc.

At Heely Falls, plant No. C-14, no extensive maintenance of hydraulic or electrical equipment was necessary. A number of defective control cables were replaced. All high-tension and low-tension oil breakers were overhauled.

At Auburn, plant No. C-18, the forebay was unwatered and the racks were cleaned. A number of new stop logs were framed for use in the dam. One of the generators was overhauled. Defective lightning arresters on the 6,600-volt feeders were replaced.

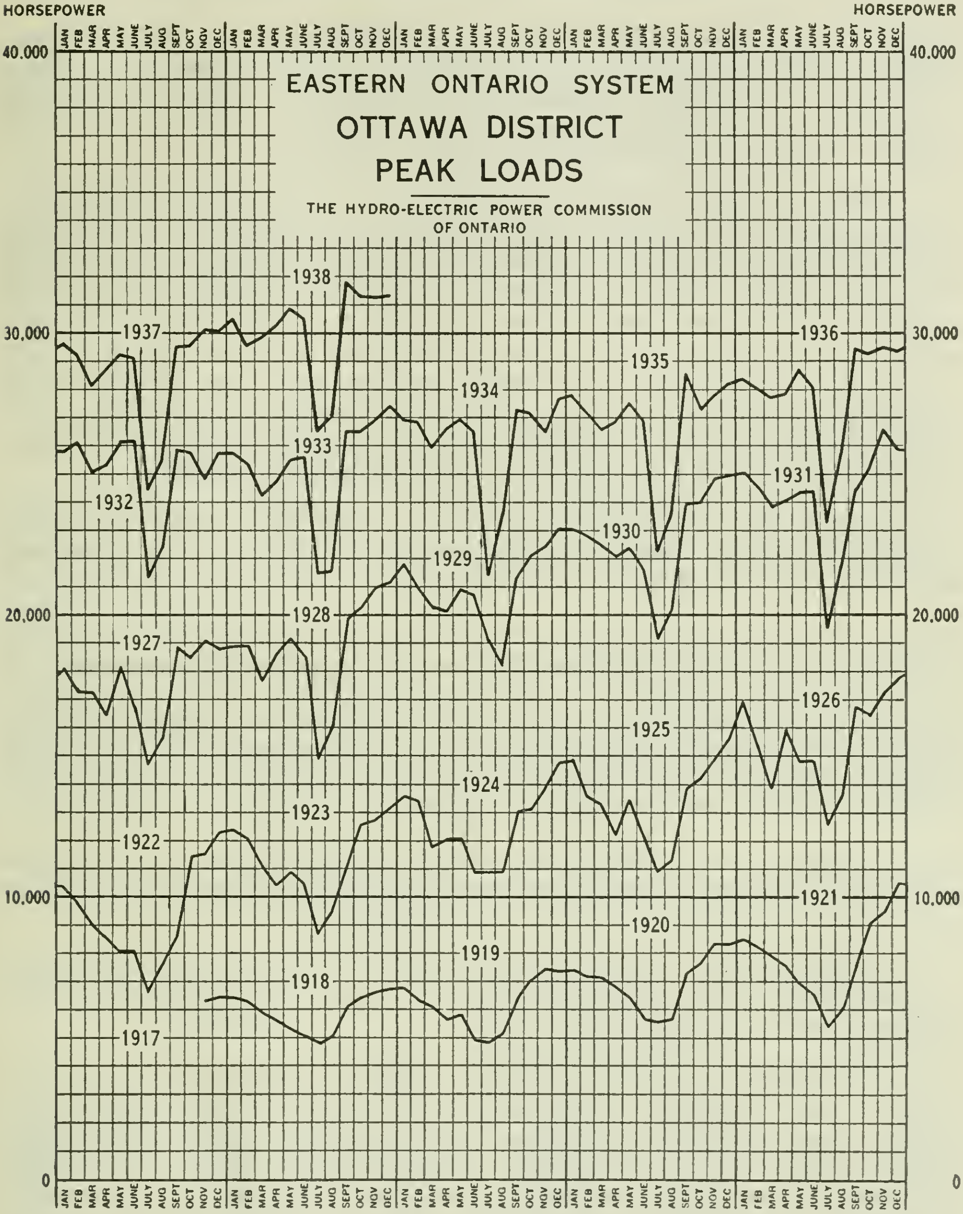
At Fenelon Falls, plant No. C-30, the turbines were unwatered and necessary repairs and adjustments were made. New collector rings were installed on one of the generators.

At Sills Island, plant No. C-56, the turbines and turbine gears were overhauled. The bearing supports of one turbine were strengthened. The governors were overhauled. One of the generators was thoroughly overhauled. Damaged over-voltage and tripping relays on one of the generators were removed for repairs and reinstalled.

At Carleton Place generating station on the Mississippi river the foundation of the building was inspected by a diver. The building was completely re-roofed. The lifting rack over the spare wheel pit was reinforced in order to facilitate daily operation of the stop logs in providing closer regulation of the discharge out of Mississippi lake.

At Galetta generating station on the Mississippi river defective bearings were replaced on one of the turbines. The stop log checks were repaired in three sluiceways in the dam. The oil breakers were all overhauled.

At Calabogie generating station on the Madawaska river two generators, rated at 2,000 kv-a, 6,600 volts, were seriously damaged during an electrical



storm on June 7. Repairs were carried out by the Commission's maintenance staff and included the supply and installation of complete new stator windings, replacement of approximately 10 per cent stator iron laminations, supply and installation of new collars on all field coils and the supply and installation of miscellaneous parts such as fan blades, finger plates, field leads, etc. As noted in last year's Report the total output capacity of the turbines at this plant was increased by approximately 600 horsepower by the excavation of a ridge in the tail race. The new stator windings for the generators were therefore designed for a rated output capacity of 2,500 kv-a each, or a total increase in rated capacity of 1,000 kv-a. The three single-phase transformers at this plant have a rated capacity of 2,000 kv-a each at 66,000 volts, but since the transmission voltage in that part of the system is only 33,000 volts, the transformers were operating on only part of the winding with a consequent reduction in capacity. The windings of these transformers have now been reconnected in such a manner as to provide a total capacity of 6,000 kv-a.

While the above work was in progress, a programme of general plant rehabilitation was undertaken. The forebay was unwatered and an accumulation of about 300 yards of silt, stumps and sunken logs was removed from in front of the racks. A defective section of wood rack at the end of the main racks was renewed. The wood rack in front of the exciter turbine was replaced by a steel rack. The upstream side of the bulkhead wall was treated with asphalt. The station roof coating was renewed. A new concrete water diversion saddle was erected on the roof in order to prevent the formation of large icicles, which in the past have frequently damaged certain of the 6,600-volt feeders in falling. The oil breakers and other electrical equipment were overhauled.

At Bowmanville distributing station one of the 750-kv-a transformers was overhauled and the defective water cooling coil replaced. The 44,000-volt electrolytic lightning arresters were overhauled.

At Brockville distributing station the lightning arresters and 44,000-volt oil breakers were overhauled. The defective station storage battery was replaced.

At Cornwall transformer station the four 5,000-kv-a, 110,000/44,000-volt transformers were thoroughly overhauled. All high-tension oil breakers and lightning arresters were overhauled. The station site was improved by the planting of shrubs and decorative flower beds.

At Oshawa No. 1 distributing station the high-tension oil breaker and electrolytic lightning arresters were overhauled. Defective low-tension bushings were replaced on one of the 3,000-kv-a transformers.

At Smiths Falls distributing station the old high-tension electrolytic arresters were replaced by a modern line arrester. The transformer water cooling system was overhauled.

At Smiths Falls transformer station, during a severe lightning storm on July 14, the 1,500-kv-a, three-phase, 44,000/2,400-volt transformer in the tertiary bank failed in service. Since this was the third failure of this transformer under similar circumstances, it was decided to replace the primary windings on each leg with windings of an improved design. The transformer was rebuilt accordingly and returned to service on December 10. Defective low-tension bushings were replaced on the 3,000-kv-a transformer in the tertiary bank. Defective timbers under certain of the high-tension transformers were replaced. The high-tension and low-tension oil breakers were overhauled.

At Sidney transformer station the installation of a new 15,000-kv-a, 110,000/44,000-volt bank of transformers, together with the necessary outdoor bus structure, switching equipment, etc., made it possible to operate the Chats Falls-Sidney transmission line at the 110,000 volts for which it was designed. Previous to placing the new transformer bank in service, this line was operated at 44,000 volts during periods of emergency in 1937.

The inspection and maintenance of high-voltage transmission lines was actively carried out during the year. 802 poles were stubbed and 191 poles were replaced due to rot at the ground line or other deterioration. Sand-creosote collars were installed on 3,029 poles. Approximately 2,500 defective 44,000-volt, pin-type insulators were replaced. A number of poles were relocated at different points on the system as a result of highway changes. Approximately 58 miles of rural lines were erected. Routine maintenance work was carried out, including straightening poles, replacing defective cross arms and pins, adjusting guys, examining and replacing damaged conductors, joints, etc. Tree trimming, weed cutting and underbrushing were carried out on numerous high-voltage and low-voltage line sections.

Meter Department and Repair Shops, Belleville

The Meter department is responsible for the operation and maintenance of all metering and relay equipment on the system and also for the checking into service of all new electrical equipment installed. Special tests relating to radio and telephone interference, ground conductivity and voltage conditions were made at numerous points on the system. The services of this department are available to any municipality wishing to have electrical measurements made or technical problems investigated.

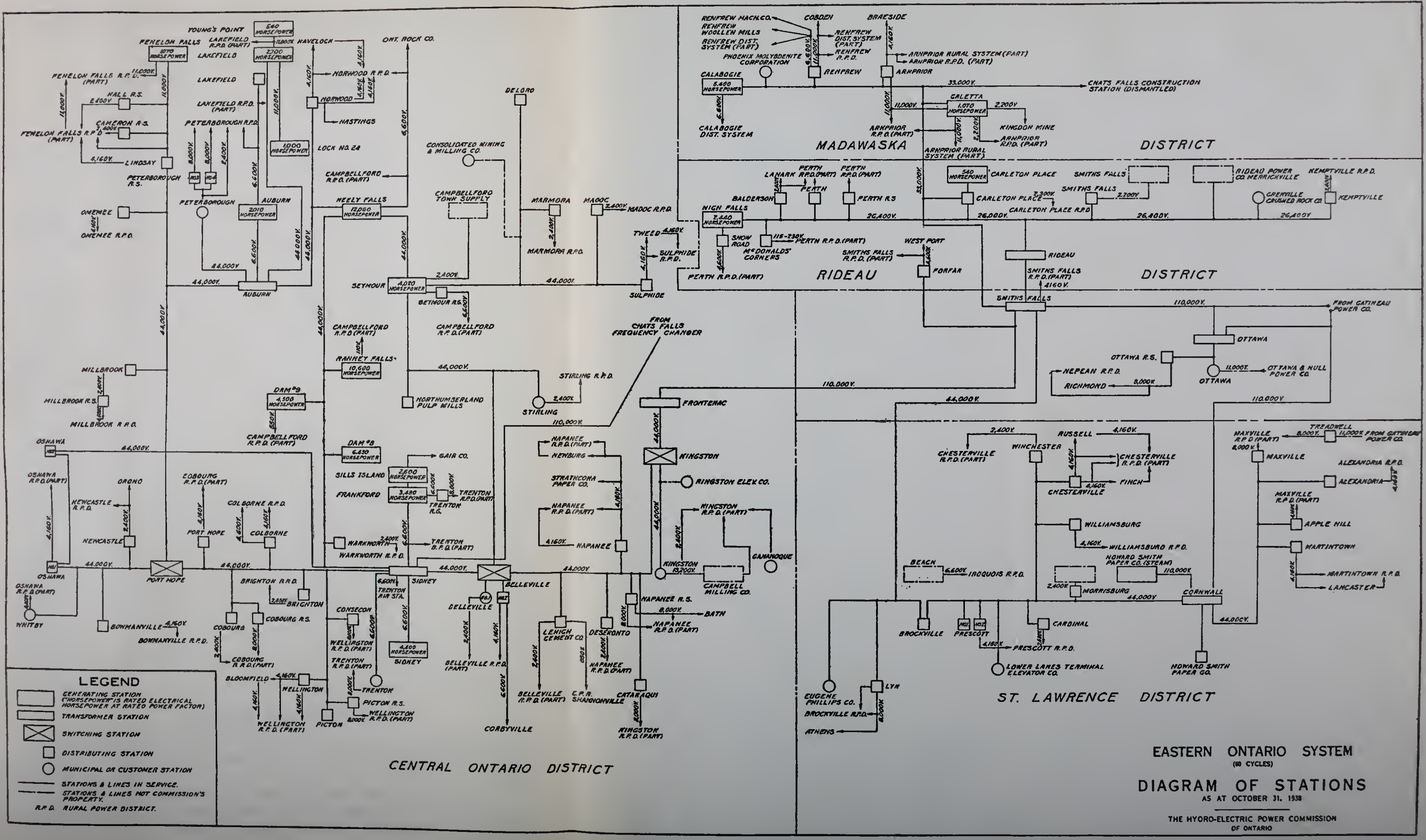
The Belleville machine and meter repair shop continued to test and repair service meters for municipal and rural systems. 3,399 meters were repaired and 3,358 new meters handled. The usual programme of machine shop work in connection with hydraulic and electrical maintenance was carried out. Over 250 samples of insulating oil from the field were tested, and approximately 12,000 gallons of oil were filtered during the year.

EASTERN ONTARIO SYSTEM—LOADS OF MUNICIPALITIES—1937-1938

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Alexandria	216.0	229.2	....	13.2
Apple Hill	54.2	46.1	8.1	....
Arnprior	945.0	1,005.0	....	60.0
Athens	130.4	123.3	7.1	....
Bath	47.1	47.3	....	0.2
Belleville	5,351.6	5,560.1	....	208.5
Bloomfield	123.3	126.4	....	3.1
Bowmanville	2,273.7	2,404.3	....	130.6
Braeside	168.0	167.6	0.4	....
Brighton	323.0	369.0	....	46.0
Brockville	3,345.8	3,868.6	....	522.8
Cardinal	251.3	258.4	....	7.1
Carleton Place	1,596.9	1,682.2	....	85.3
Chesterville	249.6	283.2	....	33.6
Cobden	69.0	77.0	....	8.0

EASTERN ONTARIO SYSTEM—LOADS OF MUNICIPALITIES—1937-1938—Concluded

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Cobourg	1,769.4	1,749.3	20.1	....
Colborne	174.9	222.5	....	47.6
Deseronto	155.2	165.5	....	10.3
Finch	78.1	85.3	....	7.2
Hastings	103.8	102.8	1.0	....
Havelock	178.0	171.1	6.9	....
Kemptville	351.0	413.2	....	62.2
Kingston	9,066.0	9,816.4	....	750.4
Lakefield	295.3	294.6	0.7	....
Lanark	92.4	85.8	6.6	....
Lancaster	46.4	53.8	....	7.4
Lindsay	2,234.2	2,507.5	....	273.3
Madoc	180.1	204.4	....	24.3
Marmora	128.5	140.9	....	12.4
Martintown	30.5	40.2	....	9.7
Maxville	97.5	103.2	....	5.7
Millbrook	77.5	84.4	....	6.9
Morrisburg	....	244.6	....	....
Napanee	1,206.4	1,340.5	....	134.1
Newburg	38.7	42.3	....	3.6
Newcastle	162.6	147.2	15.4	....
Norwood	105.5	142.1	....	36.6
Omemee	154.1	129.8	24.3	....
Orono	93.6	107.3	....	13.7
Oshawa	15,721.5	15,803.3	....	81.8
Ottawa	29,611.1	30,589.4	....	978.3
Perth	1,483.9	1,551.3	....	67.4
Peterborough	9,810.0	9,783.0	27.0	....
Picton	1,044.8	1,158.8	....	114.0
Port Hope	1,681.2	1,906.7	....	225.5
Prescott	1,027.6	1,053.8	....	26.2
Richmond	50.5	54.9	....	4.4
Russell	60.2	68.8	....	8.6
Smiths Falls	2,129.4	2,300.1	....	170.7
Stirling	286.8	337.8	....	51.0
Trenton	3,458.1	3,625.6	....	167.5
Tweed	235.3	246.2	....	10.9
Warkworth	69.7	86.0	....	16.3
Wellington	250.6	253.5	....	2.9
Westport	87.1	92.5	....	5.4
Whitby	1,225.2	1,308.3	....	83.1
Williamsburg	221.1	185.6	35.5	....
Winchester	315.0	331.2	....	16.2


LEGEND
GENERATING STATION "HORSEPOWER" IS RATED ELECTRICAL HORSEPOWER AT RATED POWER FACTOR)
TRANSFORMER STATION
SWITCHING STATION
DISTRIBUTING STATION
MUNICIPAL OR CUSTOMER STATION
STATIONS & LINES IN SERVICE.
STATIONS & LINES NOT COMMISSION'S PROPERTY.
R.P.D. RURAL POWER DISTRICT.
CENTRAL ONTARIO DISTRICT
MADAWASKA DISTRICT
RIDEAU DISTRICT
ST. LAWRENCE DISTRICT
YOUNG'S POINT
640 HORSEPOWER
FENELON FALLS
1070 HORSEPOWER
LAKEFIELD R.P.D. (PART)
LAKEFIELD
2,700 HORSEPOWER
HAVELOCK
ONT. ROCK CO.
FENELON FALLS R.P.D. (PART)
11,000V.
NORWOOD R.P.D.
NORWOOD
HASTINGS
HALL R.S.
CAMERON R.S.
FENELON FALLS R.P.D. (PART)
LAKEFIELD R.P.D. (PART)
PETERBOROUGH R.P.D.
1,000 HORSEPOWER
LOCK NO. 24
LINDSAY
PETERBOROUGH R.S.
PETERBOROUGH
AUBURN
2,010 HORSEPOWER
CAMPBELLFORD R.P.D. (PART)
NEELY FALLS
12,060 HORSEPOWER
OMEMEE
OMEMEE R.P.D.
44,000V.
AUBURN
DELORO
CONSOLIDATED MINING & MILLING CO.
CAMPBELLFORD TOWN SUPPLY
MARMORA
MADOC
MADOC R.P.D.
MARMORA R.P.D.
TWEED
SULPHIDE R.P.D.
SULPHIDE
SEYMOUR
4,020 HORSEPOWER
SEYMOUR R.S.
CAMPBELLFORD R.P.D. (PART)
CAMPBELLFORD R.P.D. (PART)
RANNEY FALLS
10,680 HORSEPOWER
FROM CHATS FALLS FREQUENCY CHANGER
STIRLING R.P.D.
STIRLING
NORTHUMBERLAND PULP MILLS
MILLBROOK
MILLBROOK R.S.
MILLBROOK R.P.D.
DAM No. 9
4,500 HORSEPOWER
CAMPBELLFORD R.P.D. (PART)
OSHAWA
DAM No. 8
6,450 HORSEPOWER
GAIR CO.
SILLS ISLAND
2,600 HORSEPOWER
FRANKFORD
3,480 HORSEPOWER
TRENTON R.P.D. (PART)
TRENTON R.S.
OSHAWA R.P.D. (PART)
ORONO
COBOURG R.P.D. (PART)
NEWCASTLE R.P.D.
COLBORNE R.P.D.
NEWCASTLE
PORT HOPE
COLBORNE
WARKWORTH
TRENTON R.P.D. (PART)
WARKWORTH R.P.D.
OSHAWA
PORT HOPE
SIDNEY
BELLEVILLE
OSHAWA R.P.D. (PART)
WHITBY
BRIGHTON R.P.D.
BRIGHTON
TRENTON AIR STA.
CONSECON
BOWMANVILLE
BOWMANVILLE R.P.D.
COBOURG
COBOURG R.S.
COBOURG R.P.D. (PART)
WELLINGTON R.P.D. (PART)
TRENTON R.P.D. (PART)
TRENTON
4,400 HORSEPOWER
SIDNEY
BELLEVILLE
BELLEVILLE R.P.D. (PART)
CORBYVILLE
BLOOMFIELD
WELLINGTON
PICTON R.S.
WELLINGTON R.P.D. (PART)
WELLINGTON R.P.D. (PART)
PICTON
LEHIGH CEMENT CO.
DESERONTO
BELLEVILLE R.P.D. (PART)
C.P.R. SHANNONVILLE
NAPANEE R.P.D. (PART)
CATARAQUI
KINGSTON R.P.D. (PART)
NAPANEE R.P.D. (PART)
NEWBURG
STRATHCONA PAPER CO.
NAPANEE R.P.D. (PART)
NAPANEE
FRONTENAC
KINGSTON
KINGSTON ELEC. CO.
KINGSTON R.P.D. (PART)
GANANOQUE
KINGSTON
CAMPBELL MILLING CO.
NAPANEE R.S.
BATH
NAPANEE R.P.D. (PART)
RENFREW MACH. CO.
RENFREW WOOLLEN MILLS
RENFREW DIST. SYSTEM (PART)
COBDEN
BRAESIDE
RENFREW DIST. SYSTEM (PART)
RENFREW R.P.D.
ARNPRIOR RURAL SYSTEM (PART)
ARNPRIOR R.P.D. (PART)
PHOENIX MOLYBDENITE CORPORATION
RENFREW
ARNPRIOR
CALABOGIE
6,400 HORSEPOWER
CHATS FALLS CONSTRUCTION STATION (DISMANTLED)
GALETTA
1,070 HORSEPOWER
KINGDON MINE
CALABOGIE DIST. SYSTEM
ARNPRIOR R.P.D. (PART)
ARNPRIOR R.P.D. (PART)
ARNPRIOR RURAL SYSTEM (PART)
LANARK R.P.D. (PART)
PERTH R.P.D. (PART)
PERTH
PERTH R.P.D. (PART)
BALDERSON
PERTH R.S.
540 HORSEPOWER
CARLETON PLACE
SMITHS FALLS
RIDEAU POWER CO. MERRICKVILLE
KEMPTVILLE R.P.D.
CARLETON PLACE
SMITHS FALLS
GRENVILLE CRUSHED ROCK CO.
KEMPTVILLE
HIGH FALLS
2,440 HORSEPOWER
CARLETON PLACE R.P.D.
SNOW ROAD
McDONALDS' CORNERS
PERTH R.P.D. (PART)
WEST PORT
SMITHS FALLS R.P.D. (PART)
FORFAR
RIDEAU
SMITHS FALLS R.P.D. (PART)
PERTH R.P.D. (PART)
SMITHS FALLS
FROM GATINEAU POWER CO.
OTTAWA
OTTAWA R.S.
NEPEAN R.P.D.
RICHMOND
OTTAWA
OTTAWA & HULL POWER CO.
TREADWELL
FROM GATINEAU POWER CO.
MAXVILLE R.P.D. (PART)
MAXVILLE
CHESTERVILLE R.P.D. (PART)
WINCHESTER
RUSSELL
CHESTERVILLE R.P.D. (PART)
FINCH
CHESTERVILLE
ALEXANDRIA R.P.D.
ALEXANDRIA
MAXVILLE R.P.D. (PART)
APPLE HILL
WILLIAMSBURG
WILLIAMSBURG R.P.D.
MARTINTOWN
HOWARD SMITH PAPER CO. (STEAM)
MARTINTOWN R.P.D.
LANCASTER
BEACH
IROQUOIS R.P.D.
MORRISBURG
CORNWALL
BROCKVILLE
PRESCOTT
CARDINAL
PRESCOTT R.P.D.
LOWER LAKES TERMINAL ELEVATOR CO.
HOWARD SMITH PAPER CO.
EUGENE PHILLIPS CO.
LYN
BROCKVILLE R.P.D.
ATHENS
110,000V.
44,000V.
33,000V.
26,400V.
26,000V.
11,000V.
8,000V.
6,600V.
4,160V.
2,400V.
2,200V.

EASTERN ONTARIO SYSTEM
(60 CYCLES)

DIAGRAM OF STATIONS
AS AT OCTOBER 31, 1938

THE HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO

EASTERN ONTARIO SYSTEM—RURAL POWER DISTRICT LOADS—1937-1938

Rural power district	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Alexandria	52.5	82.4	....	29.9
Arnprior	62.5	383.4	....	320.9
Belleville	490.9	566.5	....	75.6
Bowmanville	139.9	118.8	21.1	....
Brighton	27.0	28.0	....	1.0
Brockville	472.1	506.1	....	34.0
Calabogie	....	48.3	....	....
Campbellford	99.5	117.7	....	18.2
Carleton Place	25.0	53.0	....	28.0
Chesterville	350.5	417.6	....	67.1
Cobourg	397.7	456.4	....	58.7
Colborne	148.8	173.7	....	24.9
Fenelon Falls	359.6	336.1	23.5	....
Iroquois	585.8	573.7	12.1	....
Kemptville	32.9	40.3	....	7.4
Kingston	671.7	735.5	....	63.8
Lakefield	96.1	144.5	....	48.4
Madoc	....	9.0	....	....
Marmora	1.5	15.5	....	14.0
Martintown	103.4	147.8	....	44.4
Maxville	254.0	383.5	....	129.5
Millbrook	72.3	77.1	....	4.8
Napanee	357.6	447.2	....	89.6
Nepean	920.0	1,083.7	....	163.7
Newcastle	74.0	90.5	....	16.5
Norwood	38.3	64.1	....	25.8
Omemee	5.0	23.2	....	18.2
Oshawa	1,144.4	1,261.6	....	117.2
Perth	49.0	145.0	....	96.0
Peterborough	631.8	792.3	....	160.5
Prescott	159.6	182.1	....	22.5
Renfrew	90.4	118.0	....	27.6
Smiths Falls	300.1	312.2	....	12.1
Stirling	66.2	91.6	....	25.4
Sulphide	17.3	35.0	....	17.7
Trenton	147.1	162.6	....	15.5
Warkworth	13.8	30.7	....	16.9
Wellington	330.1	459.7	....	129.6
Williamsburg	104.2	97.0	7.2	....

THUNDER BAY SYSTEM

The maximum twenty-minute peak of the primary load on the Thunder Bay system was 95,824 horsepower. This is 7.9 per cent greater than in 1937, and is the highest primary peak in the history of this system. The primary energy showed a decrease of 8.3 per cent from last year.

The market for secondary power (used by paper mills for the electrical generation of steam) was great enough to utilize more than the remaining available generating capacity for the major portion of the time. Arrangements have, therefore, been in force, similar to those existing in 1937, whereby the paper mills under the control of the Abitibi Power and Paper Company were permitted to obtain further secondary power from the Kaministiquia Power Company, a subsidiary of the Abitibi Power and Paper Company, through the Commission's transformers and over the Commission's transmission circuits. Other secondary power customers were restricted to some extent during peak load periods.

There has been no restriction of primary power supply to any customer and no serious interruption to service. On November 3, 1937, and April 18, bushing failures on the 22,000-volt oil circuit-breakers at Port Arthur transformer station resulted in short interruptions to customers receiving power through this station. It has been necessary on occasions to restrict the secondary load demands of customers for short periods in order to carry the system load with satisfactory frequency and voltage regulation.

Power is supplied to Magnet Consolidated Mines Limited, a new customer, at 44,000 volts over a short extension to the transmission line supplying the mines in the Bankfield area.

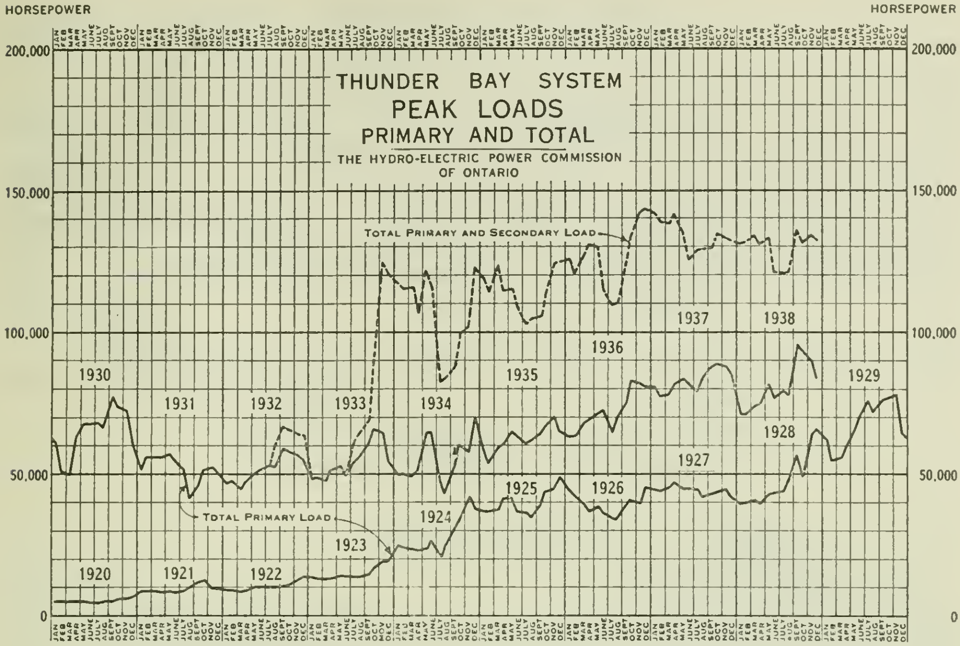
The voltage of the transmission line from Cameron Falls to the Long Lac transformer station was increased from 44,000 to 110,000 volts on January 23, when the new 9,000-kv-a Long Lac station was placed in service.

The generating and transformer stations have all functioned reliably and satisfactorily throughout the year. During the period June 10 to July 19, No. 3 unit at Cameron Falls generating station was taken out of service for welding eroded areas on the turbine blades.

New motor-driven flyball heads were installed on No. 3 and 4 governors at Cameron Falls generating station. These replaced the heavy flyballs on the main generator shafts. Routine maintenance work on the other units at this station, and those at Alexander generating station, has been done as opportunity offered; that is, when the load permitted individual units to be temporarily released from service. Maintenance work has been carried out on the power transformers and oil circuit-breakers at the generating stations, and also at Port Arthur and Fort William transformer stations. Special attention has been given to the testing of transformer and oil circuit-breaker bushings. A number of unsatisfactory bushings have been replaced, some with new ones and others with reconditioned bushings. One 8,000-kv-a transformer at Cameron Falls generating station was removed from service on September 6, after the operation of the sensitive protection against internal faults, and one core bolt was found burned. A new set of core bolts with asbestos insulation was obtained and the transformer reassembled.

The automatic reclosing feature on the oil circuit-breaker at Cameron Falls generating station controlling the 110,000-volt transmission line to Long Lac transformer station was placed in service on September 29 and has given satisfactory service. The automatic reclosing feature on the two 44,000-volt oil circuit-breakers at Long Lac transformer station was placed in service on August 3.

Very little trouble has been encountered with the 110,000-volt transmission lines between Cameron Falls generating station and Port Arthur transformer station. A number of flashovers have occurred during electrical storms, causing



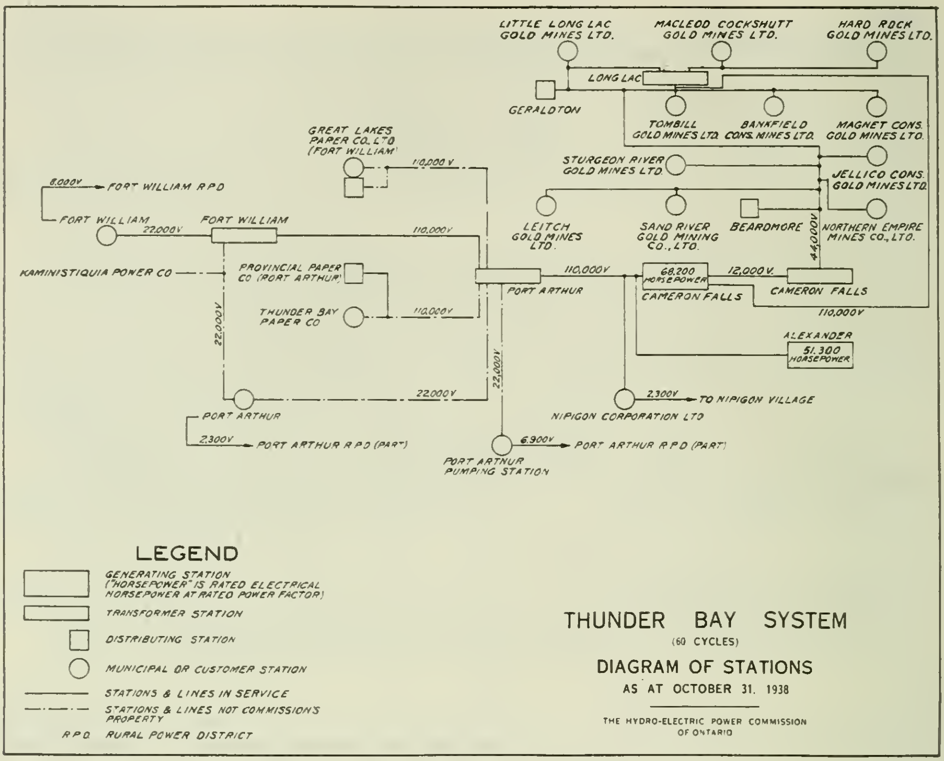
interruptions of short duration to one or more customers. Special attention has again been given to the testing of insulators and the replacement of those found defective, and to the maintenance of poles and conductors.

Service on the 110,000-volt line to Long Lac transformer station and the 44,000-volt lines supplying power to the mines in the Beardmore, Bankfield and Little Long Lac areas has been satisfactory, but there have been a number of occasions when service has been interrupted due to trees falling over the line and to highway blasting operations.

The precipitation in the watershed supplying this system has been above average, 28.72 inches being recorded. The elevation of lake Nipigon on October 31 was 852.04, compared with 852.14 for the same time last year.

THUNDER BAY SYSTEM—LOADS OF MUNICIPALITIES—1937-1938

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Beardmore	69.7	105.0		35.3
Fort William	12,689.0	13,841.8		1,152.8
Geraldton	372.6	522.8		150.2
Nipigon Township	185.0	176.9	8.1	
Port Arthur	40,964.7	40,646.2	318.5	


LITTLE LONG LAC GOLD MINES LTD.
MACLEOD COCKSHUTT GOLD MINES LTD.
HARD ROCK GOLD MINES LTD.
LONG LAC
GERALDTON
TOMBILL GOLD MINES LTD.
BANKFIELD CONS. MINES LTD.
MAGNET CONS. GOLD MINES LTD.
STURGEON RIVER GOLD MINES LTD.
JELLICO CONS. GOLD MINES LTD.
LEITCH GOLD MINES LTD.
SAND RIVER GOLD MINING CO., LTD.
BEARDMORE
NORTHERN EMPIRE MINES CO., LTD.
44,000V
GREAT LAKES PAPER CO. LTD (FORT WILLIAM)
110,000V
6,000V
FORT WILLIAM R.P.D.
FORT WILLIAM
22,000V
FORT WILLIAM
110,000V
KAMINISTIQUIA POWER CO
PROVINCIAL PAPER CO (PORT ARTHUR)
THUNDER BAY PAPER CO
110,000V
22,000V
110,000V
PORT ARTHUR
68,200 HORSEPOWER
CAMERON FALLS
12,000V.
CAMERON FALLS
110,000V
ALEXANDER
51,300 HORSEPOWER
22,000V
22,000V
PORT ARTHUR
2,300V
PORT ARTHUR R.P.D. (PART)
2,300V
TO NIPIGON VILLAGE
NIPIGON CORPORATION LTD
6,900V
PORT ARTHUR R.P.D. (PART)
PORT ARTHUR PUMPING STATION
LEGEND
GENERATING STATION ("HORSEPOWER" IS RATED ELECTRICAL HORSEPOWER AT RATED POWER FACTOR)
TRANSFORMER STATION
DISTRIBUTING STATION
MUNICIPAL OR CUSTOMER STATION
STATIONS & LINES IN SERVICE
STATIONS & LINES NOT COMMISSION'S PROPERTY
R.P.D. RURAL POWER DISTRICT
THUNDER BAY SYSTEM
(60 CYCLES)
DIAGRAM OF STATIONS
AS AT OCTOBER 31, 1938
THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

THUNDER BAY SYSTEM—RURAL POWER DISTRICT LOADS—1937-1938

Rural power district	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Fort William	168.2	235.9	....	67.7
Port Arthur	94.5	162.6	....	68.1

MANITOULIN RURAL POWER DISTRICT LOADS—1937-1938

Rural power district	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
Manitoulin	140.7	257.3	....	116.6

MANITOULIN DISTRICT

Due to the growth of load on this district, resulting from extensions to the rural system, it was necessary to have the Manitoulin Pulp Company, from whom power for distribution over the district is purchased, install an additional generating unit. This new unit of 250 kv-a capacity was first placed in service on April 1. Prior to that date interruptions of service to all consumers were rather frequent, due chiefly to the necessity of removing the single generating unit from service for repairs. Subsequently, however, there were no major interruptions, those which did occur exceeding one minute duration in one instance only.

Maintenance of the Kagawong distributing station was confined to minor items of a routine nature.

NORTHERN ONTARIO PROPERTIES

Nipissing District

Operation

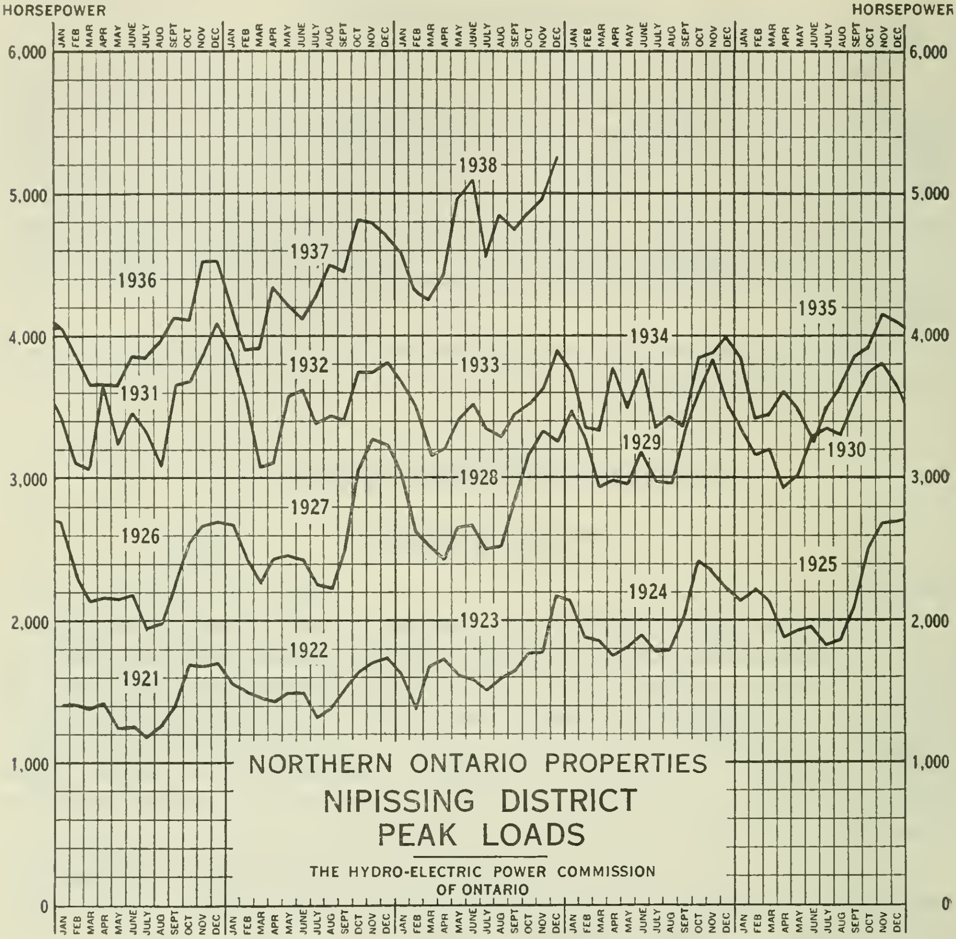
Storage reserves on the South River watershed were inadequate to produce the river flow necessary for generation of the entire district load throughout the year. During the months of May and June these reserves were conserved by obtaining a supplementary supply of power from the Sudbury district, but towards the middle of August they were almost depleted to the maximum extent permissible. However, precipitation conditions then became more favourable and made it possible to carry the load without further assistance from the Sudbury district up to the end of the year.

Operation of the district throughout the year was quite satisfactory, interruptions to customers' service, other than those prearranged, being confined to five occasions totalling 11 minutes' duration.

Maintenance

At Nipissing generating station routine tests and inspections were performed on the electrical, mechanical and hydraulic equipment and the required adjustments and repairs made. The governor pumps were rebored and fitted with new piston and leathers. The 22,000-volt line oil circuit-breaker was overhauled and fitted with new contacts. The foundation for the road bridge over the pipe line was rebuilt. The timber well for housing the water level gauge and transmitter was rebuilt. 328 pipe-line benches were relocated and the decayed spots treated with creosote oil to arrest decay. Some grading was done on the pipe line sub-grade to keep the pipe from settling and to provide better drainage. 200 steel plates with tarred felt pads were put on the pipe line to stop leaks at the butt joints of the wood staves.

At Bingham Chute generating station routine tests and inspections were carried out on the electrical, mechanical and hydraulic equipment, and the required adjustments and repairs made. The 3-conductor. 600-volt exciter cable on No. 2 unit was found defective and was replaced. Failure of this cable is attributed to the flooding of the power house during the spring freshet in 1928.



Coarse gravel was spread on the earth-filled dam, along with some rock rip-rap on the east side of the forebay, to arrest slight leakage. The new spare armature winding held in stock for No. 1 generator was installed. A defective armature coil was replaced in No. 2 generator. A complete set of wrist pins was machined and installed in the bell cranks, governor shafts, clevises and shift rings, eight in each unit. The upper and lower pipe-line thimbles were scraped on the interior surfaces and painted with red lead. The scroll cases of the turbines were painted. As part of a yearly programme, 14 cubic yards of rock were removed from the sidewalls of the pipe-line cut to provide room for working on the pipe-line sills and benches, and the drainage ditches were cleaned out.

At Elliott Chute generating station routine tests and inspections were performed on the electrical, mechanical and hydraulic equipment and any adjustments or repairs found necessary were made. A weak high-voltage bushing was found in one of the 650-kv-a power transformers. It was replaced by a new oil-filled bushing and the defective bushing was sent to the Laboratory for further investigation. The defects were located and it was possible to rebuild the bushing and return it for use as a spare.

The timber cribbing of the drainage inspection wells, placed in the earth-filled dam to collect and observe leakage through the fill, was giving way, and the walls were rebuilt of hollow tile.

Culverts were repaired, some grading was done on the grounds, and gravel and rip-rap was placed on the earth-filled dam to compensate for erosion. The 2,200-volt oil circuit-breaker was overhauled. The slip rings on the generator were turned down. The turbine and draft tube were found to be in very good condition, the pitting on the runner blades, while increasing slightly each year, has not progressed sufficiently to warrant repairs.

At the transformer stations routine tests and inspections were made. Two low-voltage bushings were found defective, one in each of two transformers at the Canadian Timber distributing station. These were replaced with new bushings.

Defective poles, crossarms and guys were renewed in the line to Nipissing village, and 34 sand-creosote preservative collars installed. On the 22,000-volt lines, 254 preservative collars were installed, 21 poles stubbed, 1 pole replaced, 166 crossarms renewed, 2,754 insulator pins renewed and 594 insulators replaced, 148 of these having been broken by stones and rifle bullets.

General maintenance was carried out on the storage dams to offset the normal wear and tear. Bush roads and culverts were repaired and cleared where required. The rock fill on the downstream side of Craig Lake dam was completed, making this an earth and rock dam instead of a timber structure. This work has been carried out over a period of years and time for completion before the timber structure would require renewal.

Sudbury District

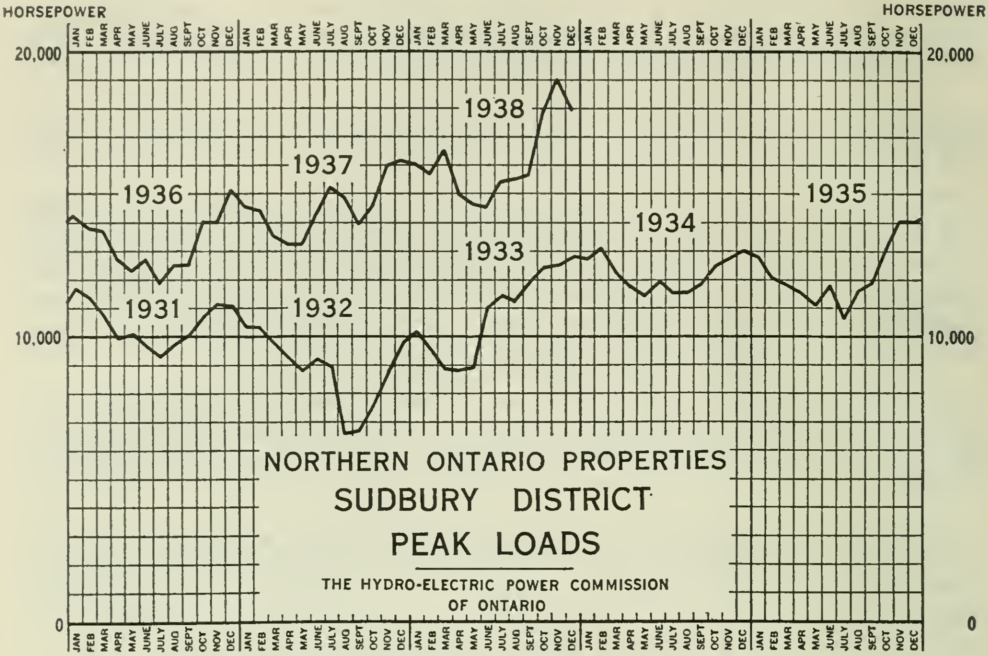
Operation

Water storage and river flow conditions on both the Wanapitei River and Sturgeon River systems met all requirements for power generation satisfactorily throughout the year.

Operation of the district was in general satisfactory throughout the year.

Continuous operation of Crystal Falls generating station in parallel with the other generating stations on the district was started on November 12. This station, which was acquired from the Abitibi Power and Paper Company in August, 1937, had only been operated as a unit of the Sudbury district intermittently up to this date.

To facilitate the construction of a new concrete dam to replace the existing timber crib dam at Coniston generating station, the station was removed from service and the forebay unwatered from June 29 to July 23. Following this, the McVittie generating station was removed from service from August 1 to August 26 to facilitate removal of the old concrete dam at this station. A new concrete dam had been built in 1936, but conditions had not been favourable for removal of the old dam heretofore.



Maintenance

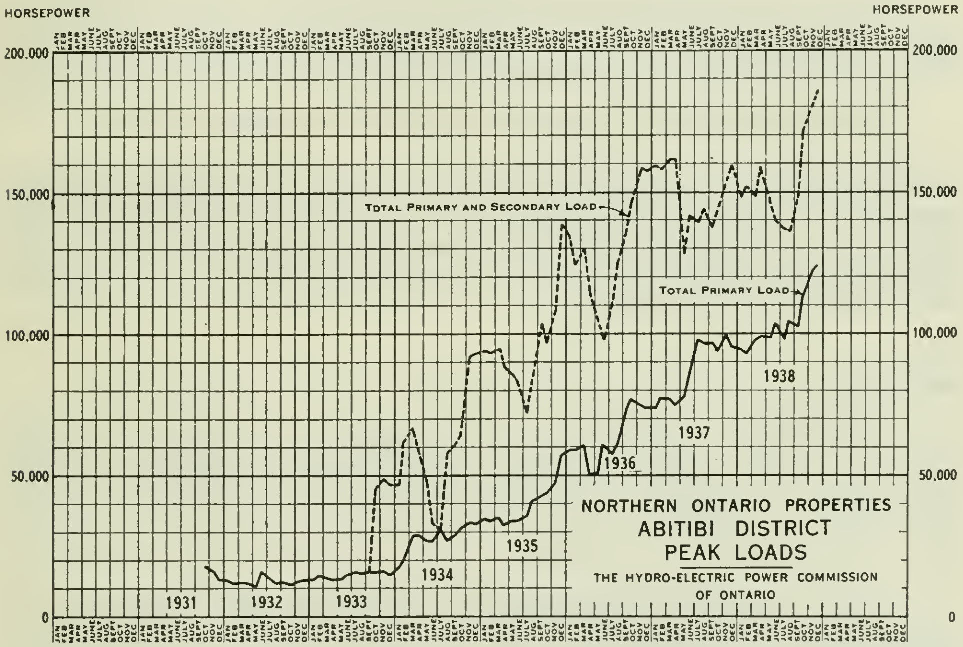
At Coniston generating station the necessary maintenance of buildings and equipment was carried out. During the shut-down of the plant when the new dam was being built, the inside surfaces of the penstocks and the headworks racks were scraped, wire-brushed and painted with red lead and linseed oil. The forebay walls were repaired and painted, and repairs made to the drain gate in the forebay wall. The timber bridge from the generating station to the transformer building was replaced with a steel and concrete structure and a covered passage constructed on it.

At McVittie generating station regular maintenance of buildings and equipment was carried out. During the shut-down of the plant for the removal of the old dam, the inside of the penstocks was given a coat of red lead and linseed oil paint.

At Stinson generating station regular tests and inspections were carried out. No maintenance other than of a minor routine nature was required.

At Crystal Falls generating station further maintenance was carried out to bring it up to standard. The steam-heating system to thaw out the taintor gates in the main and north dams was overhauled. Necessary repairs were made to the taintor gates. The log booms in the forebay were overhauled and repaired and the necessary new sections constructed. The lignum-vitae bearings in the four units were renewed; the excessive amount of fine abrasive silt in suspension in the river water during the spring freshet causes very rapid wear of the lignum-vitae. The required painting and maintenance of the colony buildings was carried out. The sills under the storehouse, which had decayed, were renewed.

A section of the Stinson-Coniston line, which was badly damaged during road construction, was rehabilitated to bring it back to standard, as was a section of the Crystal Falls-Coniston line. The cost of these repairs was billed to the road contractor and a settlement made. A section of the Stinson-Coniston line and also of the Coniston-Neelon junction line were relocated on account of highway improvements. The McVittie-Coniston line was completely overhauled. A number of insulators on the various lines, damaged by thrown stones and rifle bullets, were replaced.



Abitibi District

Operation

The normal maximum capacity of the Abitibi Canyon generating station was increased from 180,000 horsepower to 240,000 horsepower on March 24, when the installation of the fourth 48,000-kv-a bank of transformers was completed and placed in service. It is now possible to deliver power to the station high-tension bus from any four of the five 60,000-horsepower generating units concurrently. The operation of this station throughout the year was satisfactory.

Stream flow was at all times adequate to generate primary and secondary load demands. The new Frederick House Lake dam, completed and released to the Operating department on April 15, permits storage of water in Frederick House and Night Hawk lakes for utilization as required to augment the flow of the Abitibi river, thus increasing the dependable output of the Abitibi Canyon generating station during periods of low natural run-off.

There were twenty single-circuit and seventeen double-circuit automatic outages of the high-tension line between Abitibi Canyon and Copper Cliff during the year, of which fifteen double-circuit and fifteen single-circuit outages were due to electrical storms, two double-circuit and two single-circuit outages due to unknown causes, and the remaining three single-circuit outages due to causes external to the lines.

There were fifteen automatic outages of the Abitibi Canyon to Kirkland Lake, Matachewan and Larder Lake high-tension lines, of which fourteen were due to electrical storms and one to a cause external to the lines.

All transformer stations operated satisfactorily throughout the year.

New high-tension switching stations at LaForest and Mattagami, placed in service on July 20 and August 23 respectively, make it possible to isolate any one of the six sections of the two Timmins-Copper Cliff 132,000-volt circuits and retain the remaining five sections in service, where formerly a complete single circuit had to be isolated.

Maintenance

At the Canyon generating station the regular tests and inspections were performed and the necessary maintenance, consisting generally of minor adjustments and repairs, was carried out. On No. 2 turbine it was found that the bolts holding the discharge cone to the runner had worked loose and failed. These were replaced and tack-welded in place to prevent their working loose.

At the various transformer stations the regular tests and inspections were carried out. The maintenance consisted of minor adjustments and repairs to structures and equipment.

On the transmission lines the regular patrols and inspections were carried out. Insulators, damaged in most cases by thrown stones and rifle bullets, were replaced. Brush cutting was done as required and ground treatment applied to a number of poles. A number of poles broken by motor cars were replaced, and, where required by highway construction, pole lines were relocated. On the telephone line from Hunta to Timmins 284 spruce poles were replaced with cedar, 176 poles cut off and reset, 11 spruce poles replaced with spruce cut adjacent to the right-of-way, and 136 poles were fitted with push braces or guys. On the Timmins-Copper Cliff telephone line 601 poles were cut off and reset and 325 poles replaced.

Abitibi District—60-Cycle Division

As mentioned in last year's Report, operations on this district, then known as Espanola district, were discontinued on May 1, 1937, when the McMillan Gold Mines Limited, the sole customer on the district at that time, abandoned operations. However, on July 15, 1938, initial delivery of power to the Denison Nickel Mines Limited, a new customer in this district, was made. Power for delivery to this customer is purchased from the Abitibi Power and Paper Company at its Espanola generating station and is transmitted at 33,000 volts to the Denison Company's receiving station over approximately 24 miles of transmission line.

Operation of the district was quite satisfactory and maintenance requirements were negligible.

Patricia District

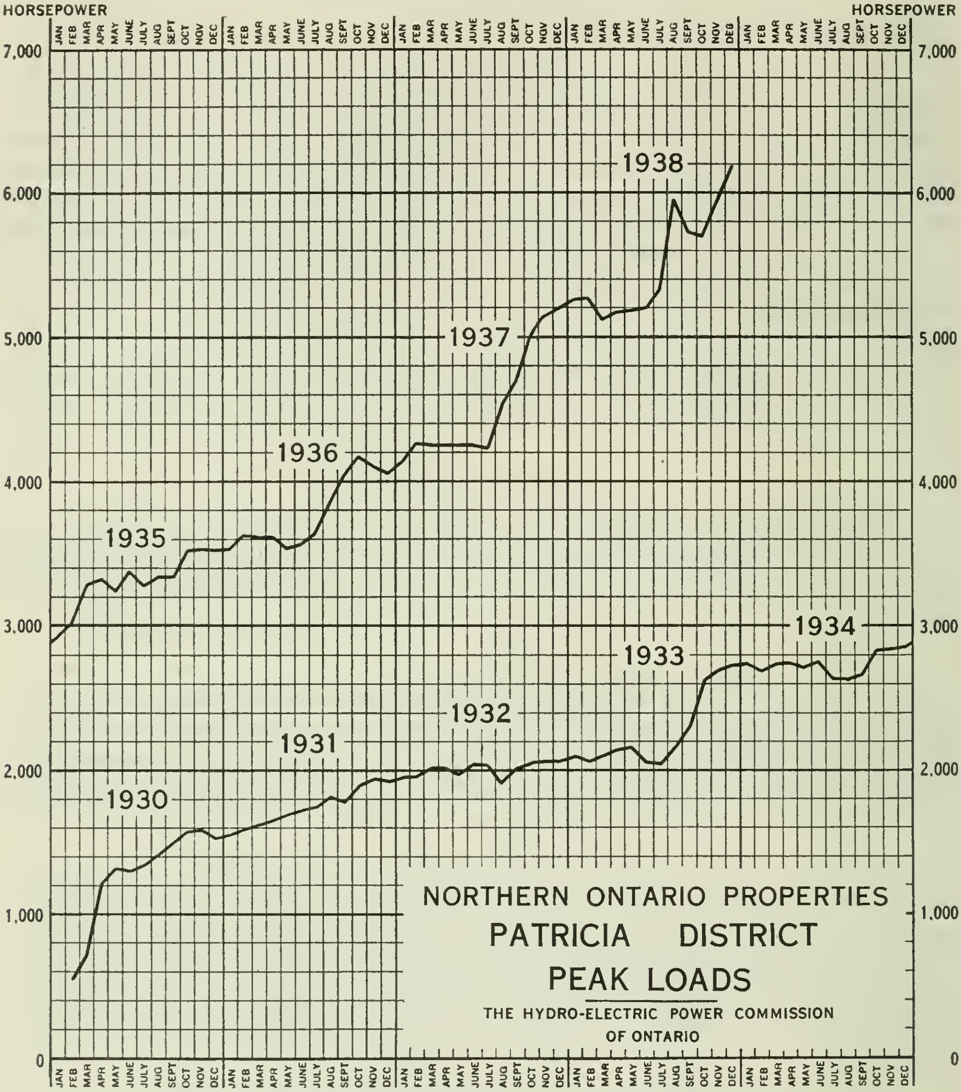
The generating and transformer station at Ear Falls on the English river has operated satisfactorily throughout the year. The load supplied has been higher than in 1937, the maximum yearly twenty-minute peak showing an increase of 19 per cent, and the energy generated being 24 per cent greater.

One new customer has been added. On May 30, power was supplied at 2,300 volts to the J. E. Hammell mining property at Red Lake through the spare transformer bank at Howey Gold Mines. Madsen Red Lake Gold Mines brought its mill into production on August 11, resulting in a considerable increase in load. Operations at Red Lake Gold Shore Mines were suspended on September 11, and this customer has been shut down since that date.

Routine maintenance work has been done on all electrical and hydraulic equipment throughout the year. On December 9, 1937, failure of the belt driving the pilot exciter of No. 1 generator resulted in an interruption of nine minutes to customers. A second failure of this belt drive occurred on March 12, but on this occasion service was not interrupted. Failure of a current transformer on No. 2 generator feeder caused an interruption of 14 minutes on June 14.

The 44,000-volt transmission line between Ear Falls generating station and the Howey Gold Mines was purchased from the latter Company by the Commission as of June 1. Since that time the line has been thoroughly inspected and reconditioned, this work including stubbing of all weakened poles and the application of sand-creosote collars to all poles not already treated. There were four outages of this circuit during the season due to lightning, but no permanent damage was done to the line. On September 11, by arrangement with the customers, the line was taken out of service for 1 hour and 37 minutes in order to replace cross arms at two 2-pole structures. The sections of 44,000-volt transmission line owned by the various mining companies have given satisfactory service throughout the year.

The flow in the English river has been regulated and controlled by means of the Lac Seul conservation dam at Ear Falls as required by the Lake-of-the-Woods Control Board.



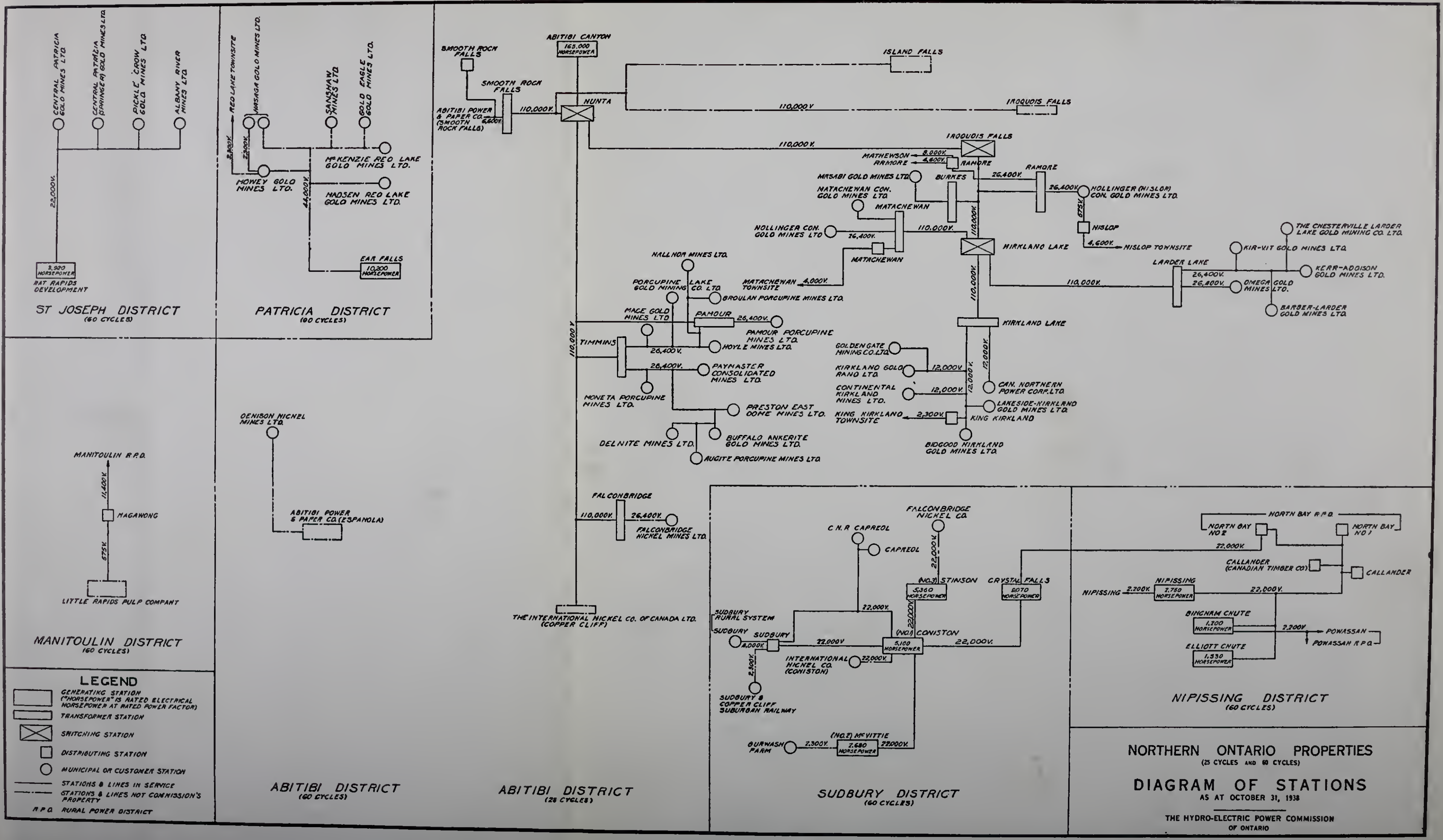
The precipitation in the vicinity of Ear Falls has been above average, 27.31 inches being recorded. The elevation of Lac Seul on October 31 was 1,169.82 as compared with 1,170.65 at the same date last year.

St. Joseph District

The load in this district shows an increase, the maximum yearly twenty-minute peak being 4.3 per cent higher, and the energy generated being 21 per cent greater than in the previous year.

No new customers have been added. Operations at the Springer property of the Central Patricia Gold Mines were resumed on May 2. The Albany River Gold Mines discontinued mining operations on July 7, and only a small amount of power was taken by this customer subsequent to that date.

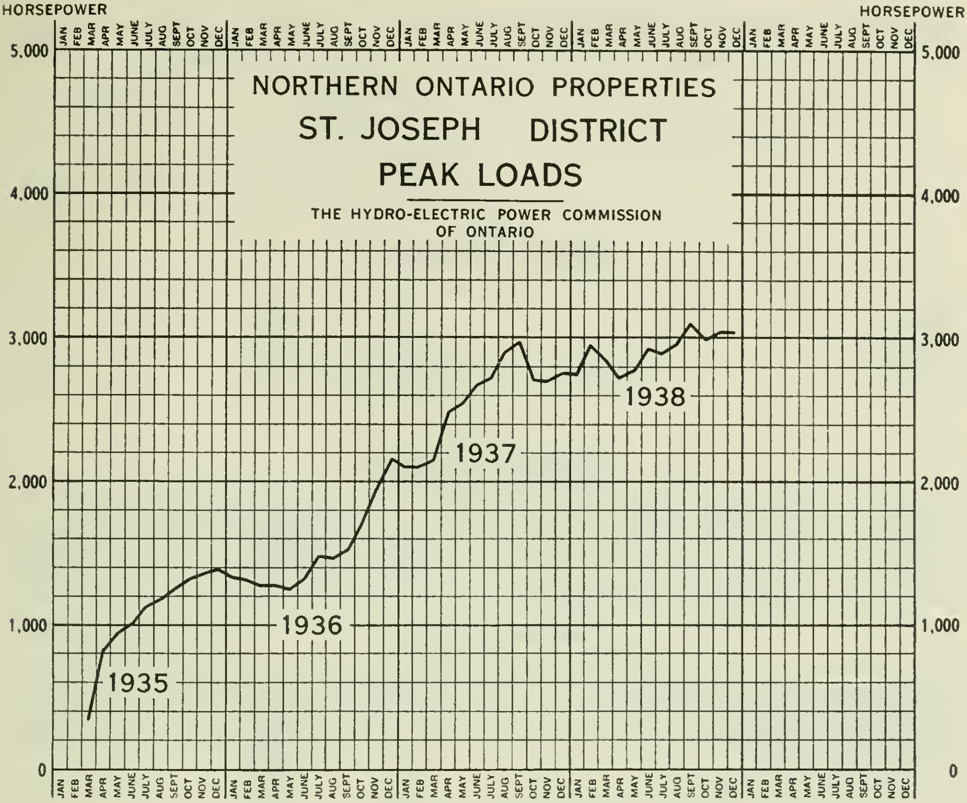
All electrical and hydraulic equipment has functioned satisfactorily throughout the year. By arrangement with the customers, No. 1 and No. 2


CENTRAL PATRICIA GOLD MINES LTD.
CENTRAL PATRICIA (SPRINGER) GOLD MINES LTD.
PICKLE CROW GOLD MINES LTD.
ALBANY RIVER MINES LTD.
22,000V.
3,920 HORSEPOWER
RAT RAPIDS DEVELOPMENT
ST JOSEPH DISTRICT
(60 CYCLES)
RED LAKE TOWNSITE
HASAGA GOLD MINES LTD.
SANSHAW MINES LTD.
GOLD EAGLE GOLD MINES LTD.
3,800V.
2,300V.
McKENZIE RED LAKE GOLD MINES LTD.
HOWEY GOLD MINES LTD.
44,000V.
MADSEN RED LAKE GOLD MINES LTD.
EAR FALLS
10,200 HORSEPOWER
PATRICIA DISTRICT
(60 CYCLES)
SMOOTH ROCK FALLS
SMOOTH ROCK FALLS
ABITIBI POWER & PAPER CO. (SMOOTH ROCK FALLS)
6,600V.
110,000V.
ABITIBI CANYON
165,000 HORSEPOWER
HUNTA
ISLAND FALLS
110,000V.
IROQUOIS FALLS
110,000V.
IROQUOIS FALLS
MATHEWSON
8,000V.
RAMORE
4,600V.
RAMORE
MASABI GOLD MINES LTD.
BURKES
26,400V.
RAMORE
26,400V.
HOLLINGER (HISLOP) CON. GOLD MINES LTD.
675V.
HISLOP
4,600V.
HISLOP TOWNSITE
MATACHEWAN CON. GOLD MINES LTD.
MATACHEWAN
HOLLINGER CON. GOLD MINES LTD.
26,400V.
110,000V.
110,000V.
MATACHEWAN
KIRKLAND LAKE
MATACHEWAN TOWNSITE
4,000V.
110,000V.
110,000V.
THE CHESTERVILLE LARDER LAKE GOLD MINING CO. LTD.
KIR-VIT GOLD MINES LTD.
LARDER LAKE
26,400V.
26,400V.
KERR-ADDISON GOLD MINES LTD.
OMEGA GOLD MINES LTD.
BARBER-LARDER GOLD MINES LTD.
HALLNOR MINES LTD.
PORCUPINE LAKE GOLD MINING CO. LTD.
BROULAN PORCUPINE MINES LTD.
MACE GOLD MINES LTD.
PAMOUR
26,400V.
PAMOUR PORCUPINE MINES LTD.
110,000V.
TIMMINS
26,400V.
HOYLE MINES LTD.
26,400V.
PAYMASTER CONSOLIDATED MINES LTD.
MONETA PORCUPINE MINES LTD.
PRESTON EAST DOME MINES LTD.
DELNITE MINES LTD.
BUFFALO ANKERITE GOLD MINES LTD.
AUGITE PORCUPINE MINES LTD.
KIRKLAND LAKE
GOLDEN GATE MINING CO. LTD.
KIRKLAND GOLD RAND LTD.
12,000V.
CONTINENTAL KIRKLAND MINES LTD.
12,000V.
12,000V.
12,000V.
CAN. NORTHERN POWER CORP. LTD.
LAKESIDE-KIRKLAND GOLD MINES LTD.
KING KIRKLAND TOWNSITE
2,300V.
KING KIRKLAND
BIDGOOD KIRKLAND GOLD MINES LTD.
DENISON NICKEL MINES LTD.
ABITIBI POWER & PAPER CO. (ESPANOLA)
FALCONBRIDGE
110,000V.
26,400V.
FALCONBRIDGE NICKEL MINES LTD.
THE INTERNATIONAL NICKEL CO. OF CANADA LTD. (COPPER CLIFF)
ABITIBI DISTRICT
(60 CYCLES)
ABITIBI DISTRICT
(25 CYCLES)
MANITOULIN R.P.D.
11,400V.
MAGAWONG
675V.
LITTLE RAPIDS PULP COMPANY
MANITOULIN DISTRICT
(60 CYCLES)
LEGEND
GENERATING STATION ("HORSEPOWER" IS RATED ELECTRICAL HORSEPOWER AT RATED POWER FACTOR)
TRANSFORMER STATION
SWITCHING STATION
DISTRIBUTING STATION
MUNICIPAL OR CUSTOMER STATION
STATIONS & LINES IN SERVICE
STATIONS & LINES NOT COMMISSION'S PROPERTY
R.P.D. RURAL POWER DISTRICT
FALCONBRIDGE NICKEL CO.
C.N.R. CAPREOL
CAPREOL
22,000V.
(NO.3) STINSON
5,360 HORSEPOWER
CRYSTAL FALLS
8,070 HORSEPOWER
22,000V.
SUDBURY RURAL SYSTEM
SUDBURY
SUDBURY
4,000V.
22,000V.
22,000V.
(NO.1) CONISTON
5,100 HORSEPOWER
22,000V.
INTERNATIONAL NICKEL CO. (CONISTON)
22,000V.
2,300V.
SUDBURY & COPPER CLIFF SUBURBAN RAILWAY
(NO.2) McVITTIE
BURWASH FARM
2,300V.
2,680 HORSEPOWER
22,000V.
SUDBURY DISTRICT
(60 CYCLES)
NORTH BAY R.P.D.
NORTH BAY NO 2
NORTH BAY NO 1
22,000V.
CALLANDER (CANADIAN TIMBER CO)
CALLANDER
NIPISSING
2,200V.
NIPISSING
2,750 HORSEPOWER
22,000V.
BINGHAM CHUTE
1,200 HORSEPOWER
2,200V
POWASSAN
POWASSAN R.P.D.
ELLIOTT CHUTE
1,530 HORSEPOWER
NIPISSING DISTRICT
(60 CYCLES)

NORTHERN ONTARIO PROPERTIES
(25 CYCLES AND 60 CYCLES)

DIAGRAM OF STATIONS
AS AT OCTOBER 31, 1938

THE HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO



generators and associated equipment were taken out of service in turn during the period September 4 to 6 for inspection and general maintenance. The load on the system was restricted to the capacity of the respective generators during this period.

The 22,000-volt single-circuit transmission line between the generating station and the mining customers has given good service. There were two outages of this circuit due to lightning and three other occasions when troubles during electrical storms caused No. 1 generator to trip off the line, resulting in a partial load loss to the customers. Heavy wet snow on the line also caused No. 1 generator to trip out on two occasions. In every case service over the line was immediately resumed. The line has been carefully inspected, poles straightened, guys tightened, and trees cut down where necessary along the right-of-way. Chipped insulators were replaced on three poles, using live-line tools.

A defective 22,000-volt bushing in one transformer at Central Patricia Gold Mines, while it did not cause any interruption to power service, caused considerable disturbance on the system before the trouble was definitely located.

The precipitation in the vicinity of Rat Rapids was relatively high this year, 26.43 inches being recorded. The elevation of lake St. Joseph on October 31 was 1,225.54 as compared with 1,226.43 for the same date last year.

NORTHERN ONTARIO PROPERTIES—LOADS OF MUNICIPALITIES—1937-1938

Municipality	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
NIPISSING DISTRICT				
Callander	253.1	150.4	102.7	....
Nipissing	3.0	3.0	....	....
North Bay	3,781.5	4,020.7	....	239.2
Powassan	155.5	153.2	2.3	....
SUDBURY DISTRICT				
Capreol	195.7	195.7	....	....
Sudbury	7,186.3	8,230.3	....	1,044.0
ABITIBI DISTRICT				
Hislop Townsite	16.2	25.7	....	9.5
King Kirkland Townsite	28.5	35.5	....	7.0
Matachewan Townsite	117.0	137.4	....	20.4
Mooretown Townsite	....	53.3	....	....
Ramore-Matheson Townsite	84.8	123.7	....	38.9

NORTHERN ONTARIO PROPERTIES—LOADS OF RURAL POWER DISTRICTS—1937-1938

Rural power district	Peak load in horsepower		Change in load 1937-1938	
	July to Dec. 1937	July to Dec. 1938	Decrease	Increase
NIPISSING DISTRICT				
North Bay	248.7	356.3	....	107.6
Powassan	9.2	12.5	....	3.3
SUDBURY DISTRICT				
Sudbury	....	120.9	....	....

SECTION III

MUNICIPAL WORK

THE Commission acts in an advisory capacity to the municipalities with which it has contracts, and assists the municipal officials to purchase, construct or extend distribution systems. As provided under *The Power Commission Act*, all rate adjustments are approved by the Commission, therefore, a study of the operating conditions of all utilities is made annually and adjustments recommended.

In rural power districts, the Commission on behalf of the township corporations operates the rural power systems, and distributes electrical energy to the customers of the respective corporations in all such rural power districts.

NIAGARA SYSTEM

New contracts were entered into, or revised, for supplies of purchased power to meet the requirements of this system for a number of years. The contracts were as follows:

Gatineau Power Company and Gatineau Transmission Company: Maximum supply of 260,000 horsepower, to be supplied as follows: December 1, 1937, 165,000 horsepower; November 1, 1938, 200,000 horsepower; November 1, 1939, 260,000 horsepower.

Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company, Limited: Maximum supply of 250,000 horsepower, to be supplied as follows: December 14, 1937, 125,000 horsepower; November 1, 1938, 150,000 horsepower; November 1, 1941, 200,000 horsepower; November 1, 1942, 225,000 horsepower; November 1, 1943, 250,000 horsepower.

Ottawa Valley Power Company: This contract for 96,000 horsepower was unchanged.

Maclaren-Quebec Power Company and The James Maclaren Company, Limited: Maximum supply of 100,000 horsepower to be supplied as follows: December 14, 1937, 40,000 horsepower; November 1, 1938, 60,000 horsepower; November 1, 1940, 80,000 horsepower; November 1, 1944, 100,000 horsepower.

The aggregate load supplied to urban municipalities and rural power districts on this system during the year 1938, increased substantially.

The municipal load supplied showed an increase in 140 municipalities and a slight decrease in 27 municipalities.

All the rural power districts of the system, 86 in number, experienced an increase in load.

Engineering Assistance to Municipalities

General engineering assistance was given to nearly all municipalities of the Niagara system respecting the operation and management of their local Hydro utilities.

Certain municipalities received special engineering advice and assistance respecting matters which are more fully referred to below:

Blenheim—Approval was given for the expenditure of $10,000 for the construction of a Hydro building. The building is expected to be ready for occupation in January, 1939.

Brampton—All pole lines were removed from the business streets and the original street lighting was replaced with modern units carried on ornamental standards.

Brantford—All domestic and commercial consumers, originally served from the Western Counties system, have had their equipment changed and are now being served from the 25-cycle system of the Brantford Public Utilities Commission.

Caledonia—The local distribution system was changed from 2,200 volts to 4,000 volts and certain improvements were made.

Chatham—A new substation on Queen street is being constructed at an estimated cost of $39,500. It is expected to be in service early in the coming year.

Chippawa—An ornamental lighting system, using steel standards with modern lighting units, was installed on the main thoroughfares. The lighting is materially improved and the wood poles carrying house-lighting circuits have been removed to the rear of the business premises.

Dunnville—The ornamental-lighting system is being remodelled.

Dutton—An ornamental street-lighting system on the main street is being considered.

Fergus—All lines were removed from the two business blocks in the centre of the village, services being changed to the rear of the buildings or racked along the fronts.

Fonthill—Modern street-lighting units were installed in the centre of the village.

Delhi—The distribution system, formerly owned by the Delhi Light and Power Company, was purchased. The Delhi Light and Power Company's system was operated at 60 cycles and conversion to 25 cycles was necessary before Hydro service could be used. This was made available on April 1, 1938.

Forest Hill—On January 1, 1938, the village undertook operation of its own distributing system, which was formerly operated by the Toronto Hydro-Electric System under an agreement with York township. Power is supplied to the village in part by The Hydro-Electric Power Commission of Ontario and in part by the Toronto Hydro-Electric System. This arrangement will continue until December, 1939, after which all power will be supplied by the Commission.

Harrow—A new community hall, in which The Hydro-Electric Power Commission has rented office space, is being built. It is expected that the new Hydro office will be ready for occupancy about January 31, 1939.

London—An outdoor transformer substation was built to supply the Waterworks department with power to operate the new well between Byron and Lambeth.

London Township Voted Area—Improvement to the street lighting on Richmond street was made by installing centre-suspension units of higher wattage. Ornamental street lighting was also installed on a new subdivision.

Mitchell—Alterations and additions to the primary and secondary lines were made in preparation for a change in primary voltage from 1,100 volts to 4,000 volts.

Ridgetown—Approval was given for the expenditure of $2,000 for the purchase of a lot and a cement block building. The work of improving the street-lighting system was commenced.

Rodney—An ornamental street-lighting system was installed for two blocks on the main street. It was possible to eliminate the overhead wiring and greatly improve the general appearance of this portion of the village.

St. Thomas—A 1,500-kv-a, three-phase transformer, outdoor type, was installed, at a cost of $10,000, on leased property on Wellington street, to supply a residential lighting load of 110 kw. in the south-east section. It is served from a nearby 13,200-volt feeder thereby eliminating 4,050 feet of 2,300-volt feeder and improving voltage regulation. This No. 3 substation will relieve the main station where transformers were fully loaded.

Simcoe—An additional 500-kv-a station transformer was installed to complete the second bank at the substation, thus giving the municipality 3,000 kv-a in transformer capacity.

Springfield—The distribution system was changed and the voltage supply raised from 4,000 to 8,000 volts.

Stratford—An underground-feeder system was installed at the Stratford municipal station for the purpose of removing a very congested condition, and also to eliminate hazards due to a multiplicity of lines.

Tavistock—An office building costing $3,200 was constructed on land owned by the corporation.

Waterford—Plans were submitted for improvements in the distribution system to provide adequate service. This work is being done by the local Commission.

Watford—An ornamental street-lighting system was installed in the business section of the village.

Windsor—The capacity of the Walkerville No. 2 municipal station was increased from 3,000 to 6,000 kv-a. Extensive changes were made on the distribution system in East Windsor, Walkerville and Sandwich sections of the city, and induction regulators were installed on all 4,000-volt lighting feeders.

Woodstock—Due to the increase in the industrial load in the north-west section of the city, it was necessary to increase the 13,200/2,300-volt station transformer capacity by 600 kv-a. More primary feeder was placed underground on the north side of Dundas street, thus eliminating fire hazards. Improvements are being made to the street lighting in the business section of the city.

GEORGIAN BAY SYSTEM

Extensive load growth took place on this system in both urban municipalities and rural power districts, the total increase over 1937 in average load sold being 8.8 per cent.

Increases were recorded in 46 out of a total of 59 urban municipalities, and slight decreases in 13 municipalities.

The aggregate load in the rural districts was 28 per cent greater than in the previous year, with load increases taking place in 47 of 48 rural power districts, one only showing a slight decrease.

Assistance and general engineering advice was given to all of the municipalities on the Georgian Bay system in connection with the operation of their local distribution systems.

Special engineering advice and assistance was given to the following municipalities, chiefly with respect to the matters referred to:

Brechin—Extensive rehabilitation was carried out on the distribution system, which, on the main street of the village, was practically rebuilt.

Gravenhurst—The distribution system was converted from two-phase, 2,200 volts, to three-phase, 4,000 volts, and reconstructed. A new building was erected in which modern switching equipment for controlling the local distribution system was installed and accommodation for additional office space and the storage of material, tools and truck was provided.

Port Perry—The distribution system poles were removed from the business section of the main street and ornamental street-lighting standards and fixtures erected.

Priceville—The local transformer station was rehabilitated and increased in capacity and the local distribution system was rearranged to handle a large rural load.

EASTERN ONTARIO SYSTEM

The normal increase in power sold on the Eastern Ontario system continued during the year 1938 and all except five of the cost contract municipal utilities increased their load. In the five municipalities referred to, the load was practically stationary. The total amount of power sold to cost contract municipalities and rural power districts increased from 87,806 horsepower in 1937 to 101,000 horsepower in 1938, an increase of 15 per cent.

The Eastern Ontario system took delivery of the last block of power under the Gatineau contract on October 1, 1938. Under this contract the Gatineau Power Company is obligated to deliver a total of 60,000 horsepower. Up to October 1, 1938, 42,000 horsepower was being taken by the Eastern Ontario system. On this date the system took delivery of the last block of 18,000 horsepower which will take care of the estimated increase of load for 1939 and will act as a reserve for the system.

General engineering assistance was given to nearly all municipalities in the Eastern Ontario system, respecting the operation and management of their local Hydro utilities.

Certain municipalities received special engineering advice and assistance with regard to matters detailed below:

Belleville—An agreement with the Public Utilities Commission was reached whereby the Commission purchased No. 1 substation on Reid street in the northern part of the city. This enables the local utility to purchase power at 44,000 volts, effective November 1, 1937.

Bowmanville—All poles and wires were removed from the business section of King street and an improved street-lighting system was installed. Ornamental standards are used with 500-watt units spaced approximately 100 feet apart on both sides of the street. All street-lighting wires are underground on King street.

Kingston—The Public Utilities Commission has purchased from the Commission the substation switching equipment and is installing step-down transformers. It has also taken over the high-tension lines within the city connecting the Commission's high-tension station with the city substation and these lines are being rearranged with short sections of new high-tension line to provide more flexible connections for delivery of power.

Millbrook—Arrangements were completed for the municipality to vote on the question of purchasing the local distribution system.

Newcastle—On March 1, 1938, the corporation took charge of the administration and operation of the local system which about a year previously had been purchased from The Hydro-Electric Power Commission and had since been operated by the Commission in trust for the corporation.

Orono—The Police Trustees of the village obtained information respecting the operation of the distribution system, and arrangements were made to vote on the question of its purchase.

Oshawa—The removal of all poles and wires from the business sections of King and Simcoe streets and the installation of a new street-lighting system in this area was studied. The street-lighting standards will also be used by the Oshawa street railway.

Peterborough—To provide for the rapid growth of load, additional transformer equipment was purchased and installed in the municipal station, bringing the total capacity up to 12,000 kv-a.

THUNDER BAY SYSTEM

This system is made up of the cities of Port Arthur and Fort William, the township of Nipigon, and the Port Arthur and Fort William rural power districts, all of which are operated under cost contracts. All of the other customers of the system are served under fixed rates. Other than for municipal purposes power is used largely by the pulp and paper industry, the demands of which approximate 50 per cent of the total load sold on the system, the balance being divided approximately 25 per cent for municipal service and 25 per cent for the grain trade and the mining industry.

Curtailed operations of the pulp and paper industry caused a falling off in the total load sold on the Thunder Bay system during the year 1938. Due, however, to an increase in the municipal loads and to an increase of nearly 50 per cent in the power demand of the mining industry, and also to an increase in the power requirements of terminal grain elevators following improved crop conditions in the West, the net reduction in load as compared with 1937 was only about 5 per cent. The municipal load increase in Fort William approximated 8.7 per cent, and in Nipigon township, 44 per cent. In Port Arthur where two pulp and paper customers are served there was a decrease of 13 per cent. The actual reduction in the pulp and paper load in that city was much greater, but the net decrease was minimized by the heavy increase in the municipal load.

The total increase in load sold in the two rural power districts was 26 per cent.

Engineering assistance concerning the operation of the local distribution systems was given to the cities of Fort William and Port Arthur and to Nipigon village.

MANITOULIN RURAL POWER DISTRICT

The Manitoulin rural power district comprises the entire area of Manitoulin island. Power is purchased by the Commission from the Manitoulin Pulp Company's development at Kagawong and distributed to various consumers in the rural districts lying between Gore Bay, Mindemoya, and Manitowaning.

Due to a substantial increase in load it was necessary for the Manitoulin Pulp Company to install an additional 250 kv-a generating unit. This was placed in operation during the year, and a new agreement was executed between the Commission and the Company, involving the purchase of power. Additional distribution lines were constructed to serve 120 new consumers. Provision was also made for constructing an extension to South Bay Mouth to serve 35 consumers.

NORTHERN ONTARIO PROPERTIES

The generating plants and transmission lines utilized by the Commission in Northern Ontario, other than those of the Thunder Bay system, are operated in trust by the Commission on behalf of the Province. They are known as the Northern Ontario Properties, and power is supplied largely to the mining industry and to the communities adjacent to large operating mines; with one exception, viz: the Nipissing district, which includes the city of North Bay. As in previous years there has been a remarkable increase in the load supplied for mining operations, the increase being approximately 22 per cent over the previous year. At the present time 49 operating mines are being served and 9 new mining properties were supplied with power. In addition to mining customers, the Commission, in the districts included in the Northern Ontario Properties, is supplying power to two cities, three towns, and six villages, townsites and hamlets, also to two rural power districts. It is expected that a considerable expansion, both to many existing distribution systems and in many new districts will take place in 1939.

Engineering advice and assistance relative to power supply and operation of local distribution systems was given to the towns of Cochrane and Sioux Lookout, and information was supplied to a number of rural districts concerning the possibility of securing Hydro service.

The activities in the various districts of the Northern Ontario Properties are detailed as follows:—

Nipissing District

This district includes the area adjacent to the city of North Bay, the town of Powassan, the village of Callander, and adjacent rural communities. Power is supplied from three hydro-electric developments on the South river which are connected by tie transmission line to the Crystal Falls development on the Sturgeon river. Power supplied in this district is utilized entirely for municipal purposes.

Sudbury District

This district covers the area adjacent to the city of Sudbury. Power is supplied from three hydro-electric developments on the Wanapitei river interconnected by a tie transmission line to the Crystal Falls development on the Sturgeon river, to the city of Sudbury, the town of Capreol, the International Nickel, and the Falconbridge Nickel Companies. A rural distribution system was constructed and placed in operation in McKim township during the year, and studies and investigations were made with respect to extending this distribution system, and also in connection with constructing distributing lines in the townships of Neelon and Garson.

Engineering advice and assistance was given to the local commissions in Sudbury and Capreol in connection with the management and operation of their distribution systems.

Abitibi District

The area served by the Abitibi Canyon development and associated transmission lines is known as the Abitibi district. It includes the territory between and adjacent to Sudbury, Timmins, and the Quebec border and power is supplied to the mining districts of Porcupine, Shining Tree, Sudbury Basin, Matachewan, Kirkland Lake and Larder Lake. The load growth experienced in recent years has continued; 27 mining properties were served with power and 6 new mining customers were added. The increase in load growth of primary power was 22 per cent. Extensive engineering studies respecting additional transmission line and transformer capacity were made, and it is expected that additional equipment will be added next year.

All of the mining properties under contract with the Commission, as well as most of the other properties in the development stage were visited on various occasions for the purpose of rendering assistance in connection with their power supply.

The distribution systems in the mining townsites of Matachewan, Hislop and King Kirkland, also in the town of Matachewan and the village of Ramore, in all of which service to individual consumers is supplied directly by the Commission, were successfully managed and operated during the year. Substantial increases were recorded both in the number of customers served and in the amount of power supplied.

Power is purchased by the Commission from the Abitibi Power and Paper Company's hydro-electric development at Espanola. This power is at 60 cycles and the area supplied, formerly known as the Espanola district, is now part of the Abitibi district. One new mining customer was served during the year and 6.9 miles of transmission line were constructed for that purpose.

Patricia District

All of the area served by the transmission system based upon the Ear Falls development is known as the Patricia district, included in which are the mining districts of Red Lake and Woman Lake. The transmission line formerly owned by the Howey Gold Mine was purchased and rehabilitated. The local distribution system serving consumers adjacent to the Howey Mine was purchased and service to individual consumers in that area is now being handled directly by the Commission. Negotiations were carried on concerning service to three mining properties in the Woman Lake district and it is expected that a new transmission line will be constructed from the Ear Falls development into the Woman Lake district early next year.

All mining properties under contract with the Commission as well as those in the development stage were visited on various occasions and assistance rendered in connection with matters pertaining to power supply.

St. Joseph District

The area served by the transmission system based upon the Rat Rapids development on the Albany river is known as the St. Joseph district. The principal mining customers served are in the Pickle Lake area. As the Rat Rapids development is now loaded to capacity, extensive studies were made with respect to providing an additional development. As an alternative the possibility of constructing between the Uchi and Central Patricia mines, an interconnecting link which would serve to connect the Rat Rapids and Ear Falls developments was carefully investigated. As a result of these studies, it was decided to construct the interconnecting transmission line, and it is expected that this work will be undertaken early next year.

RURAL ELECTRICAL SERVICE

IN ONTARIO

THE advent of electrical service, and the construction of transmission lines in the rural districts of Ontario have become symbols of agricultural progress. During the past year the mileage of primary lines approved for construction in rural power districts of Ontario reached a new high record of 2,660 miles to serve more than 14,000 additional customers. The previous records were 2,300 miles in 1937 and 1,894 miles in 1930. Most of these lines were actually constructed during the year, or were under construction at the year's end. Due to the exceptionally heavy programme, a few lines approved in 1938 will not be completed until early in 1939.

The lowering of the service charge and the reduced requirements respecting the number of consumers per mile of line has in the past two or three years resulted in a phenomenal growth in the extension of service in rural power districts. The aggregate load supplied to all rural Hydro consumers in the Province increased during the year 1938 by 17.3 per cent. This substantial growth indicates an extended appreciation of electrical service, and an ability to install equipment to utilize this service.

The Province of Ontario extends over a vast area of 400,000 square miles, the southern part of the Province commonly known as "Old Ontario," comprising most of the settled area. In this territory there is an assessed area of approximately 40,000 square miles containing about twenty-two million acres, of which 75 per cent is land cleared for agricultural purposes. The total rural population in this area exceeds 1,100,000.

Census data indicates that there are approximately 200,000 farms in Ontario, varying from one acre to six hundred acres, or larger. It would be erroneous, however, to conclude that hydro-electric service will eventually extend to such a number of farms. Approximately ten per cent of these are very small, and service to them, if available, is supplied by the Commission under rates applicable to non-farm classes. There are also large numbers of farms jointly owned and tenanted, some having no residential buildings on them, and there are also a large number situated in remote districts out of reach of Hydro lines and stations.

During the period that the regulations respecting service to rural consumers required a minimum of three farm contracts per mile of primary line the Commission made surveys in various parts of the Province and estimated that approximately 75,000 standard or large farms would comprise the probable ultimate total of farms that could be served on this basis. Since that time new regulations have been made permitting service on the basis of two farms per mile, which necessarily has increased the number of additional farms that may be served.

For the next year it is anticipated that the miles of primary line constructed will approximate the number constructed during the past few years. As the lines extend into the more remote districts, however, the average number of farms that can be served per mile of line and the number of farms remaining to be served will become smaller, and therefore the mileage of rural lines constructed each year will decrease.

The distribution of power in, as well as the wholesale supply of power to, Ontario rural communities is almost entirely carried out by The Hydro-Electric Power Commission. A very limited amount is supplied by private companies. The Commission organizes service to consumers in townships or parts of townships which can be grouped into economic areas known as rural power districts and in doing so, acts as trustee and agent for the various townships of the Province.

There are 178 operating rural power districts, and power is delivered to approximately 100,000 rural consumers, comprising farms and dwellings in various groups. The consumers are situated in 398 townships and 98 police villages, and are served over networks of rural primary lines which aggregate more than 15,700 miles. In addition to the 398 townships served by rural power districts, 10 townships are served jointly by rural power districts and voted areas.

Promotional Efforts

The benefits of rural electrical service are explained to prospective rural consumers by means of direct information given by the Commission's employees, by demonstrations at annual fairs and exhibitions, and through the press.

The four principal farm magazines in Ontario established an editorial service whereby one or more leading editorials on the use of electricity in farming are featured each month. and the Commission has used these magazines to advertise special features of Hydro service to all its customers.

An active campaign has been carried on to encourage rural consumers to purchase electric ranges. An allowance of twenty dollars to purchasers of new electric ranges is offered to help defray the cost of installation.

The Commission has observed that quite a large proportion of consumers in rural power districts fail to make much more than a minimum use of the service and do not appear to appreciate fully how much more service can be obtained by a comparatively small addition to their monthly bills. Efforts are being made to explain this and other features of Hydro service to the farmer in ways which will appeal to him. Not only has the service charge to the rural citizen been made very small but the number of kilowatt-hours charged for at his first energy rate is usually smaller than in cities, towns and villages. Consequently, a very moderate use of energy brings him into the position where additional energy can be obtained for the low follow-up rates in force.

Uses for Electricity

As a result of the continued efforts of the Commission and other kindred interests the farming communities now have a better knowledge of the many uses to which electrical service may be applied. The progressive farmer, through information obtained and through his own inventive application, now finds

POULTRY RANCH IN LISTOWEL RURAL POWER DISTRICT

The poultry ranch pictured above first started in a small way in 1924. Hydro service was first taken in 1927, when a total of 210 kilowatt-hours was used. During 1938 the consumption increased to 175,000 kilowatt-hours. The annual output of this plant now exceeds 300,000 baby chicks, and 1,125,000 eggs. Hydro power is used exclusively, even to grinding of the feed

many new uses for electrical service. It would be impossible in this Report to describe these at length, but they may be classified under the following heads:

Lighting Service—Electric lighting is safe, convenient and time saving. It adds to the comfort and attractiveness of the farm home and reduces fire hazard to a minimum. Against the cost of energy for lighting may be set the cost of coal oil or candles. Even at 6 cents per kilowatt-hour, a 40-watt lamp can be operated nearly 24 hours for 5 cents.

The progressive farmer is using controlled lighting for increasing the production of eggs and, what is more important from the viewpoint of financial returns, obtaining a greater proportion of the annual egg yield during the months when prices are high. Special forms of lamps, such as the infra-red or heat lamps, can be used to prevent rheumatism, etc., in litters of pigs, while ultra violet lamps have proven effective in preventing rickets in young pigs and chicks, eliminating losses and providing a more rapid and sturdy growth.

Power Service—Next to lighting, the energy used for mechanical purposes gives the most valuable service for the money expended for electricity.

In the farm home washing machines, vacuum cleaners, fans and furnace blowers contribute to making the farm home equal in comfort to one in the city. Motor-driven pumps supply water for sanitary systems and general house and farm use.

In the barn, dairy and workshop of the farm, electric motors may be employed for chopping feed, wood cutting, hay hoisting, milking, cream separating, churning and the many purposes of the farm workshop. Electric milking machines reduce labour at milking time to one-half and their regular use increases the milk flow and fat content.

The cost of electricity for operating small motor-driven appliances, such as washing machines and pumps for the use of water under pressure for sanitary purposes, is very small. With energy at the 2-cent per kilowatt-hour rate, a ¼-horsepower motor can be operated at full load for three hours for 1 cent. As actually used in motor-driven appliances, the motors frequently operate at less than full load or, under automatic operation as in pumping and refrigeration, for only 25 to 50 per cent of the 24 hours.

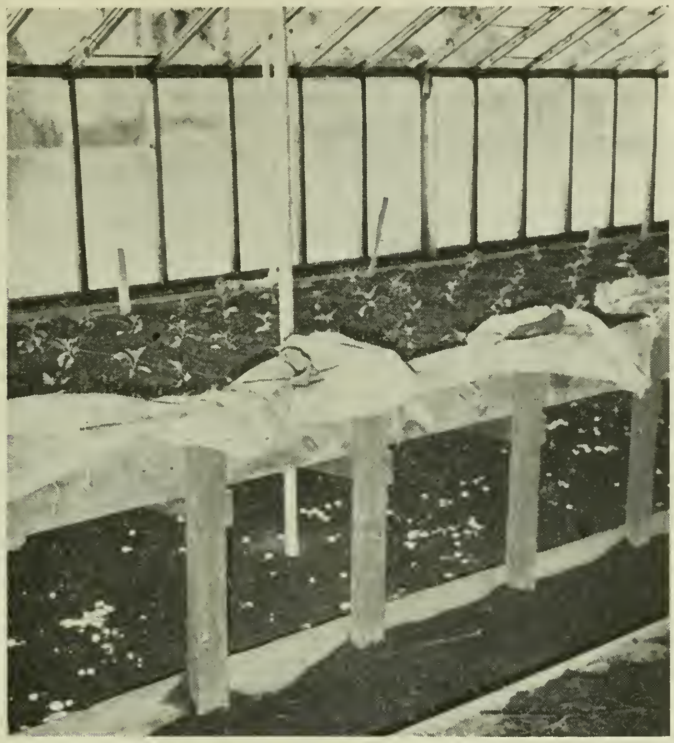
Electric Refrigeration—This is a special application of power service. Its use promotes health and comfort and reduces food losses. Ice obtained from neighbouring ponds is frequently contaminated and has endangered the health of many farm dwellers. Electric refrigeration is of special assistance in connection with dairy operations. The farmer can accumulate his separated cream for a few days with safety and can improve the marketing quality of his milk by cooling. It is also useful in egg storage.

Heating Service—Under this head come: the minor appliances of hand irons, ironing machines, toasters and hot plates, which owing to their intermittant use consume relatively small quantities of electricity per month; the major heating appliances of ranges and water heaters which need relatively large quantities of energy for their operation, and the special applications of electricity for incubating, brooding, etc., and for soil heating which only becomes economically profitable when the current used is available at specially low rates.

The electric range, although a heavy user of current, is efficient and the cost of operation is more than offset where the farmer can more advantageously employ his time than in hauling and chopping wood for the stove. It is safer and in summer provides cool cooking in comfort for the farmer's wife and also leaves her free to undertake more useful work.

Entertainment Service—Radios provide entertainment, general information and a familiarity with current events and market prices which have done much to make life on the farm more attractive and profitable. The many applications of power in a farm workshop will provide countless hours of valuable recreation and pleasure.

Miscellaneous—The miscellaneous applications of electricity seem only to be limited by the ingenuity of the farmer in adapting this modern flexible agent to his various needs. It is used when spraying against insects and to paint the barn, for incubating, brooding and for the control of humidity and ventilation in connection with poultry raising, to prevent the freezing of vegetables, to cook supplementary food for hogs and in countless other ways.



SOIL HEATING BY ELECTRICITY

Under-soil electrical heat, used for propagating seeds and developing early lettuce on top bank and for growth of mushrooms below

Recent estimates of the major electrical appliances used in rural power districts are set out in the following table:

ELECTRICAL APPLIANCES IN USE IN RURAL POWER DISTRICTS
Data for all systems for the year 1937

On the farm			In the farm home		
Item	Number of appliances	Percentage of saturation	Item	Number of appliances	Percentage of saturation
Motor	6,462	16.97	Range	6,462	16.97
Pump	4,939	12.97	Hot plate	8,300	21.80
Grain grinder	2,087	5.48	Washer	21,909	57.54
Milking machine	986	2.59	Vacuum cleaner	4,859	12.76
Milk cooler	553	1.45	Water heater, flat rate	1,281	3.36
Cream separator	2,356	6.19	Water heater, metered	637	1.67
Churn	367	0.96	Grate	288	0.75
Incubator	419	1.10	Portable air heater	3,748	9.84
Brooder	322	0.84	Ironer	459	1.21
Hot bed	39	0.10	Hand iron	28,672	75.31
Water heater, flat rate	55	0.14	Refrigerator	3,786	9.94
Water heater, metered	47	0.12	Toaster	19,941	52.37
Air Compressor	66	0.17	Radio	26,090	68.52
Battery Charger	55	0.14	Furnace blower	540	1.42
Miscellaneous	332	0.87	Pump	5,603	14.72
			Sewing machine	73	0.19
			Miscellaneous	945	2.48

The following table is also of interest, when a comparison is made between rural and urban use:

ELECTRICAL APPLIANCES IN USE IN HOMES OF URBAN AND RURAL CONSUMERS—1937

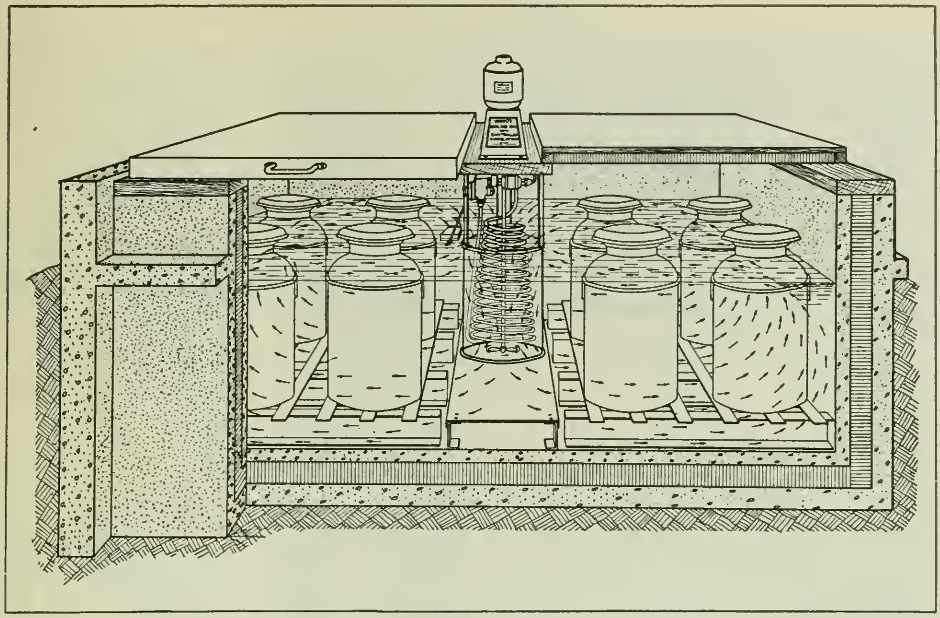
Electrical appliance	R.P.D. hamlet		R.P.D. farm		Urban	
	No. of appliances	Percentage of saturation	No. of appliances	Percentage of saturation	No. of appliances	Percentage of saturation
Range	4,992	11.26	6,462	16.97	141,581	28.6
Hot plate	9,600	21.65	8,300	21.80	83,521	16.9
Washers	18,599	41.94	21,909	57.54	224,992	45.5
Vacuum cleaner	5,365	12.10	4,859	12.76	151,448	30.6
Water heater (flat rate)	993	2.24	1,281	3.36	47,151	9.5
Water heater (metered)	781	1.76	637	1.67	44,745	9.1
Grate	340	0.77	288	0.75	36,289	7.3
Air heater	3,379	7.62	3,748	9.84	146,313	29.6
Ironers	402	0.91	459	1.21	11,315	2.3
Irons	30,142	67.98	28,672	75.31	469,045	94.9
Refrigerators	4,177	9.42	3,786	9.94	76,974	15.6
Toasters	20,642	46.55	19,941	52.37	282,294	57.1
Radios	28,237	63.68	26,090	68.52	356,761	72.2
Furnace blower	678	1.53	540	1.42	23,371	4.7

Recent Benefits to Rural Consumers

Effective May 1, 1938, the Commission received authority by Order-in-Council to construct rural primary lines on a basis of two farms per mile under existing rates. This new basis does not include service to summer cottages, which remains on the previous basis of three farms per mile. The standard number of consumers required per mile varies according to the class of service rendered. For this purpose a unit rating is allocated to each class of consumer. A total of ten units per mile made up by various classes of consumers is required before construction work is undertaken.

The following table indicates the number of units used for each class of service:

Class of consumer	Service	Units per class applicable to number per mile—May 1, 1938			
		A—Regular rural consumers		B—Summer cottage consumers	
		Units per contract	Contracts per mile	Units per contract	Contracts per mile
1B	Hamlet lighting	2.25	4.4	1.50	6.7
1C	Hamlet lighting (range)	3.75	2.7	2.50	4.0
2A	House lighting	1.90	5.3	1.25	8.0
2B	Small farm service (50 acres or less)	3.50	2.9	2.35	4.3
3	Light farm service (over 50 acres)	5.00	2.0	3.35	3.0
4	Medium farm service (single-phase)	5.00	2.0	3.35	3.0
5	Medium farm service (three-phase)	5.00	2.0	3.35	3.0
6A	Heavy farm service (single-phase)	5.00	2.0	3.35	3.0
6B	Heavy farm service (three-phase)	5.00	2.0	3.35	3.0
7A	Special farm service (single-phase)	5.00	2.0	3.35	3.0
7B	Special farm service (three-phase)	5.00	2.0	3.35	3.0



RURAL ELECTRICAL SERVICE IN ONTARIO

Milk cooling by electric refrigeration with agitation is now being used by progressive Ontario farmers to their economic advantage. It is reported that this method of cooling is less expensive, more reliable and certainly cleaner than ice

Maximum Consumption Charge

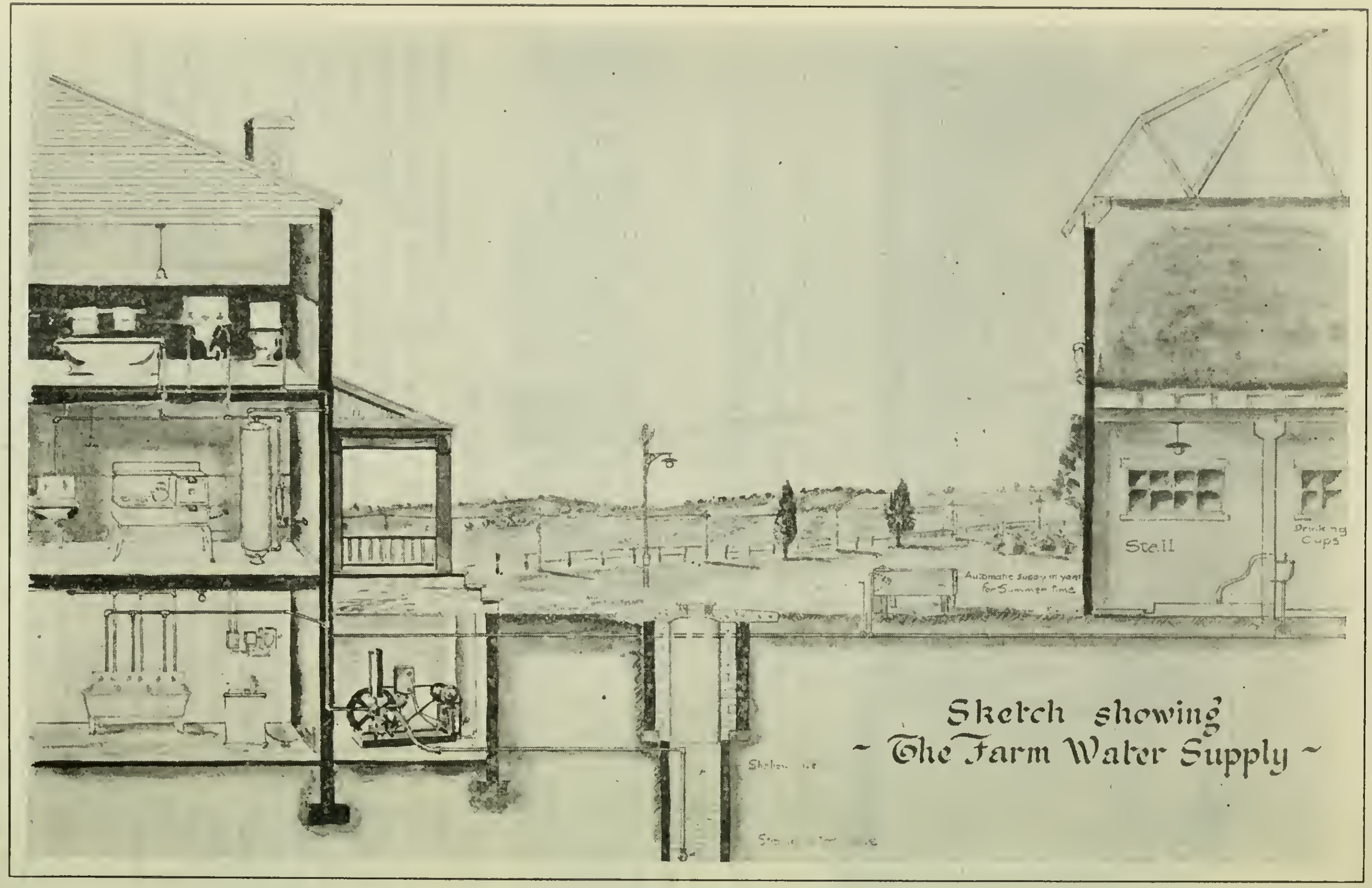
The Commission has found that the maximum economic limit of the first domestic use throughout the rural power districts of the Province is 6 cents per kilowatt-hour. In all rural power districts, the first consumption rate is fixed at a maximum of 6 cents per kilowatt-hour. The second rate has a maximum of 2 cents per kilowatt-hour which applies to all districts.

Low Third Consumption Rate for Long-Hour Users

In 1934 the Commission made available for rural consumers a special energy rate for long-hour uses of power by rural consumers. This particularly affects under-earth heating (hot-beds) and heating of water. Where the extra use of energy may be obtained from the present equipment, a third follow-up rate per kilowatt-hour of 0.75 cents gross is given in all districts. The first rate remains unchanged, except that as pointed out above it is subject to a maximum of 6 cents per kilowatt-hour, and the kilowatt-hours to be charged at the first rate remain unchanged. The number of kilowatt-hours to be charged at the second rate varies both with the class of service and the first kilowatt-hour rate. At the head of the table of rural rates at the end of this section is a schedule which shows the class of service, the number of kilowatt-hours per month to be charged for at the first rate, and the number of kilowatt-hours at the second rate according to the governing first rate.

Average Cost to Rural Consumers Decreasing

The remarkable benefits obtained by rural communities in regard to the amount charged to them during the period 1928 to 1938 is indicated in the following tables:


Sketch showing
~ The Farm Water Supply ~
Stall
Drinking Cups
Automatic supply in yard for Summer time

RURAL ELECTRICAL SERVICE IN ONTARIO

A complete automatic water system for farm water supply to the house, barn and water trough, provides all the conveniences of water service that city dwellers enjoy. The above sketch shows a complete layout, excepting the tank and effluent disposal, which must be located in an area remote from the well

HAMLET SERVICE
Classes 1B, 1C and 2A

Year	Annual Revenue	Kilowatt-hours consumed	Number of consumers billed*	Average revenue per kw-hr.	Average monthly bill	Average monthly consumption kw-hr.
1928	$ 530,407.00	10,702,031	17,585	4.95c	$2.51	50.7
1929	663,311.00	14,424,770	21,219	4.60	2.85	62.0
1930	757,558.00	17,815,987	25,013	4.25	2.73	64.2
1931	974,224.17	22,127,474	31,176	4.40	2.88	65.6
1932	1,075,081.03	24,654,386	33,638	4.36	2.76	63.3
1933	1,133,368.70	25,410,470	35,941	4.46	2.70	60.1
1934	1,149,876.67	27,768,460	37,466	4.14	2.61	63.0
1935	1,171,873.28	30,802,290	39,751	3.80	2.53	66.5
1936	1,239,010.83	35,666,241	43,014	3.47	2.49	71.8
1937	1,331,919.46	40,935,040	46,785	3.25	2.47	76.0

FARM SERVICE
Classes 2B, 3, 4, 5, 6A, 6B, 7A and 7B

Year	Annual Revenue	Kilowatt-hours consumed	Number of consumers billed*	Average revenue per kw-hr.	Average monthly bill	Average monthly consumption kw-hr.
1928	$ 569,007.00	10,969,828	9,309	5.18c	$4.97	96.1
1929	777,736.00	16,022,842	12,605	4.85	5.85	120.8
1930	863,805.00	20,507,063	16,011	4.21	5.03	119.4
1931	1,128,554.28	25,716,141	20,796	4.39	5.11	116.4
1932	1,255,482.13	28,675,400	22,432	4.38	4.84	110.5
1933	1,309,122.96	30,062,194	23,283	4.35	4.75	109.2
1934	1,319,922.69	33,312,314	23,882	3.96	4.66	117.7
1935	1,343,222.39	37,667,453	25,357	3.57	4.55	127.5
1936	1,385,784.39	45,447,669	28,198	3.05	4.31	141.4
1937	1,366,484.50	54,858,240	35,508	2.49	3.57	143.5

*It may be observed that the number of consumers reported here does not agree with those shown in other sections of the Annual Report of the Commission. This is due to the fact that the figures given here represent consumers actually billed, whereas elsewhere in the Report the tables show the number of contracts executed to the end of the fiscal year. In many cases service is not given until the following year.

Provincial Government Aids Rural Electrical Service.

Assistance respecting electrical service is given by the Province to farmers and rural residents in three ways, namely:

First—A "grant-in-aid" toward the initial capital cost of supplying electrical service, amounting to 50 per cent of the cost of line and secondary equipment necessary to deliver power from the supply point of the Commission's stations or of a city, town, village, etc., to the customer's property. This is the maximum amount provided for by *The Rural Hydro-Electric Distribution Act.*

Second—Authority was granted to the Commission by the Province in *The Rural Power District Service Charge Act,* 1930, to fix a maximum service charge for any class of service in a rural power district. Where as may be the case in newly-established rural power districts, such maximum service charge is not sufficient to meet the necessary cost of service, as specified by the Commission, the deficit is chargeable to and payable out of the Consolidated Revenue Fund of the Province. Payments made out of the Consolidated Revenue Fund for this purpose, on account of any rural power district, are charged to that rural power district in a special account—known as the "Rural Power Service Suspense Account"—in the books of the Treasurer of Ontario, and any surplus thereafter arising from any maximum service charge in that rural power district is paid to the Treasurer of Ontario and placed to the credit of the rural power district in such suspense account until the deficit is wiped out. Where a temporary deficit arises in any rural power district owing to the application of the maximum service charge, such maximum service charge must remain in force and be charged in that rural power district until the deficit is extinguished. The application of this Act will in future be more extensively necessary, due to the reduction from the three farm- to two farm-per-mile basis.

Third—An Act—*The Rural Power District Loans Act,* 1930—to provide for granting aid towards the installation of electrical works in rural power districts was passed in 1930. The purpose of the Act is to provide, subject to regulations, advances toward the installation of electrical services in rural power districts. Aid may be granted for the wiring from the transmission or distribution lines of the Commission into and throughout dwellings, farms outhouses, and any other works which may from time to time be specified by the regulations. In addition to the wiring, loans may be obtained on transformers, motors, or other appliances, as may be necessary or expedient for any industrial, agricultural or domestic purpose which may be specified in the regulations.

Rural Loans

Under *The Rural Power District Loans Act,* 1930, authority was given to The Hydro-Electric Power Commission of Ontario, to finance the installation of wiring and the purchase of specified electrical equipment by rural farm consumers.

To October 31, 1938, 1,696 applications have been received and of these 1,229 loans have been completed, involving an outlay of $249,412. As all applications for loans are governed by regulations made subject to the provisions of the Act it will be seen from the above that quite a number fail to meet the requirements of these regulations.

To October 31, 1938, 325 loans had been repaid in full either through the maturing of the loan or because of the improved financial position of the borrower.

During the fiscal year ending October 31, 1938, there were received 321 applications which with the 35 carried over from last year were disposed of as follows:—

Loans completed	240
Withdrawn	12
Did not meet requirements	41
Approved, then withdrawn	13
Not approved	9
Approved waiting final papers	27
In process	14
	356

SUMMARY OF LOANS MADE TO OCTOBER 31, 1938

Fiscal year ending Oct. 31	Applications received	Loans consummated	Amount of Loans
			$
1931	126	74	23,542
1932	226	187	40,160
1933	144	111	20,975
1934	107	81	14,855
1935	235	169	32,450
1936	307	212	40,550
1937	230	155	29,615
1938	321	240	47,265
Total	1,696	1,229	$249,412

LOANS GRANTED TO CONSUMERS IN RURAL POWER DISTRICTS

System	Total to Oct. 31, 1937		Nov. 1, 1937, to Oct. 31, 1938		Total to Oct. 31, 1938	
	No.	Amount	No.	Amount	No.	Amount
		$		$		$
Niagara	827	160,825	196	38,250	1,023	199,075
Georgian Bay	117	30,342	30	6,315	147	36,657
Eastern Ontario	39	9,585	14	2,700	53	12,285
Thunder Bay	1	335	......	....	1	335
Manitoulin R.P.D.	5	1,060	......	....	5	1,060
All systems	989	202,147	240	47,265	1,229	249,412

The average loan is $202.94.

DETAILS OF RURAL LOANS GRANTED TO OCTOBER 31, 1938

Items applied for (including installation) in loans which have been made	Totals for 989 loans made to October 31, 1937		Totals for 240 loans made during year to October 31, 1938		Totals for 1,229 loans made to October 31, 1938	
	Number affected	Cost to consumers	Number affected	Cost to consumers	Number affected	Cost to consumers
		$ c.		$ c.		$ c.
Service	341	18,714.34	93	4,204.02	434	22,918.36
House wiring	340	29,882.33	94	7,132.18	434	37,014.51
Building wiring	340	26,031.14	72	5,014.49	412	31,045.63
Motors	48	4,961.96	2	210.00	50	5,171.96
Grain grinders	565	109,580.97	102	22,209.00	667	131,789.97
Pumping systems	77	10,711.72	26	3,809.33	103	14,521.05
Milking machines	12	3,336.00	11	3,057.15	23	6,393.15
Washing machines	34	3,587.50	6	519.45	40	4,106.95
Milk coolers	36	7,328.00	20	5,007.78	56	12,335.78
Ranges	1	165.00	....	....	1	165.00
Cream separators	....	....	1	80.00	1	80.00
Totals	....	214,298.96	....	51,243.40	....	265,542.36

Respecting the 1,229 loans made to October 31, 1938, the following table shows the number of loans made for each term of years.

One year term	21 loans	Six year term	10 loans
Two " "	45 "	Seven " "	79 "
Three " "	215 "	Eight " "	9 "
Four " "	51 "	Nine " "	0 "
Five " "	761 "	Ten " "	38 "

During the past three years there have been no loans made for periods longer than 5 years.

Provincial Assistance to Rural Consumers

The extent and effect of the Province's financial assistance with respect to the distribution of power in rural power districts should be clearly understood. The Government grant-in-aid relates solely to the initial capital investment for distribution facilities in rural power districts. Having made its grant-in-aid, the Government further participates in the operation of each district in that it guarantees a maximum service charge, otherwise its participation in the operation of the property ceases. Each rural power district pays the cost of operation, maintenance and administration of its lines. The Commission also set up, until October 31, 1935, reserves for renewals (depreciation), obsolescence and contingencies on the whole of the equipment and lines, as well as sinking fund on the investment made by the Commission on behalf of the townships served. Beginning November 1, 1935, however, no further provision will be made for contingencies as it is considered that the present accumulated contingency fund is sufficient to take care of this situation; similarly the renewals (depreciation) charges were reduced by one-eighth for the year 1936 and by one-half for the year 1937 and until further consideration is given to the problem.

RURAL LINE EXTENSIONS APPROVED BY THE COMMISSION DURING THE YEAR 1938

System	Miles of primary line	Net increase in number of consumers			Power supplied in October, 1938	Capital approved for extensions	
		Hamlet	Farm etc.	Total		Total	Provincial grant-in-aid
					h.p.	$ c.	$ c.
Niagara	1,268.92	1,838	5,686	7,524	44,202	3,061,129.00	1,530,564.50
Georgian Bay	544.68	1,345	1,493	2,838	4,987	1,152,241.00	568,982.50
Eastern Ontario	764.19	1,134	2,363	3,497	9,269	1,687,521.00	843,760.50
Thunder Bay	29.09	72	110	182	278	71,302.00	35,651.00
Manitoulin R.P.D.	42.70	86	65	151	205	101,097.00	50,548.50
Northern Ontario Properties:							
Nipissing district	11.29	43	21	64	212	26,948.00	13,424.50
Totals	2,660.87	3,384	9,738	14,256	59,153	6,100,139.00	3,042,931.50

SUMMARY OF RURAL LINE EXTENSIONS

As Approved by the Commission from June 1, 1921 to October 31, 1938, Constructed or Under Construction

System	Miles of primary line	Number of consumers			Capital approved for extensions	
		Hamlet	Farm, etc.	Total	Total	Provincial grant-in-aid
					$ c.	$ c.
Niagara	10,021.37	28,383	37,154	65,537	23,283,246.89	11,618,343.44
Georgian Bay	2,142.59	7,997	5,255	13,252	4,657,754.95	2,262,526.49
Eastern Ontario	3,372.49	10,005	9,559	19,564	7,642,732.31	3,821,366.15
Thunder Bay	126.24	274	340	614	256,241.00	128,120.50
Manitoulin R.P.D.	89.85	283	106	389	194,453.00	97,226.50
Northern Ontario Properties:						
Nipissing district	31.84	488	77	565	101,669.00	50,834.50
Totals	*15,784.38	47,430	52,491	99,921	36,136,097.15	17,978,417.58

*Note—This total includes 748.62 miles of primary line under construction on October 31, 1938, and service to 2,512 new consumers was not completed until after the end of the fiscal year.

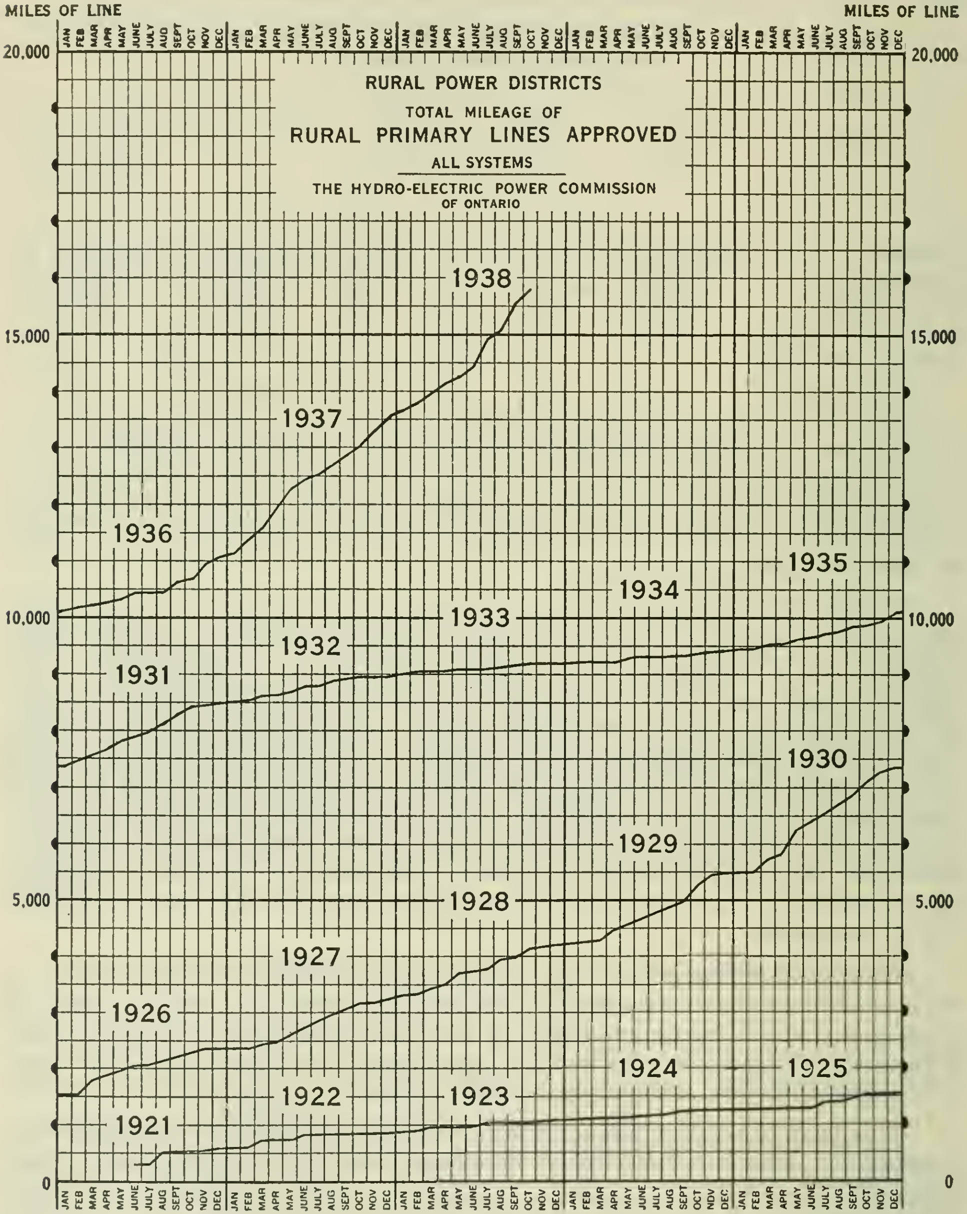
Rates for Rural Electrical Service

Rates to rural consumers are based upon service "at cost"—account being taken of the Provincial "grant-in-aid" for rural work and the operation of the provision for a maximum service charge—and as in some urban centres the rates are made up of two parts, a service charge and a consumption charge. In any rural power district the service charge to a consumer depends primarily upon the individual connected load or demand which determines his class rating (see "Classification of Services") but this is modified in the earlier years of operation of a rural power district by the provision respecting maximum service charge; the consumption charge is based upon a first, second and third kilowatt-hour rate, the first and second rate being determined by the cost of power at the source of supply to the rural power district, and the third rate is the same for all consumers.

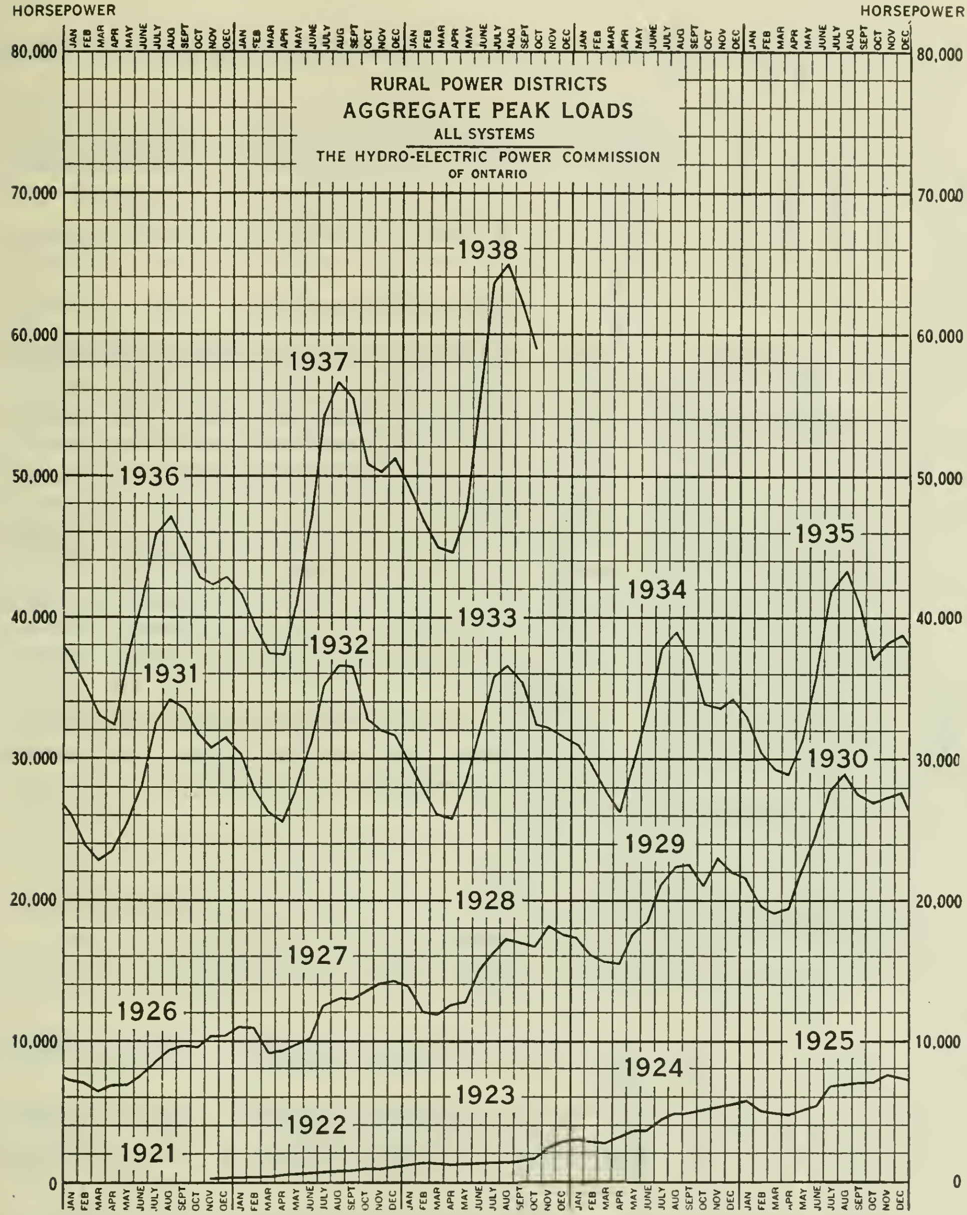
Each mile of line is assumed to represent a minimum of 10 units and to each class of service is assigned a value in such units. The table on page 72 gives the new unit rating applicable to each class of service. More than 90 per cent of the contracts entered into for farm service are either Class 2B or Class III. These, therefore, are the representative classes for individual farm service.

Less than one-half of the consumers in rural power districts are grouped in hamlets or small villages closely identified with rural activities, and these consumers are usually in Class 1B or Class 1C. It is pointed out that rural power districts do not include suburban districts or larger villages. These have their own electrical utilities.

The lowering of the maximum service charges has in the past resulted in more uniform and more nearly equal costs to the respective classes of consumers in practically all rural power districts served by the Commission. These maximum rural service charges, under prevailing conditions and especially under the 1938 reduction in the number of consumers required per mile, do not cover the costs incurred to serve rural consumers. It is expected, however, that a large number of consumers will be added to existing lines and



that the consumers will increase the use of power. This will enable the Commission, it is hoped, to more nearly meet all costs. In rural power districts where this condition cannot be obtained, deficits arising out of the application of the maximum service charge will be much greater than those where the increases have been obtained. These deficits in all cases, however, will be paid by the Province of Ontario as a loan until the rural power districts concerned operate with a surplus.



Contracts with Consumers

All agreements with consumers served by the Commission in rural power districts are for a term of five years, subject to certain limiting conditions such as govern in connection with loans under *The Rural Power District Loans Act*, guarantee contracts, etc.

At the end of this section a tabulation of the rural power districts shows the miles of line, the number of consumers and the rate schedules now in force for each district of the several systems.

RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1938

Rural power district	Property number	Miles of line	No. of consumers	Rural rates											Gross consumption charges per kilowatt-hour			Prompt payment discount on gross bill
Class				1B	1C	2A	2B	**3***	4	5	6A	6B	7A	7B				
Monthly consumption charged for at first energy rate																		
No. of kw-hrs. per month				30	30	30	30	**42**	70	70	126	126	210	210				
Monthly consumption charged for at second energy rate																		
No. of kw-hrs. where first energy rate is less than 3 cts				120	270	120	270	**258**	430	430	774	774	1290	1290				
3 cts.				105	240	105	240	**228**	380	380	684	684	1140	1140				
3.1 to 4 cts.				75	180	75	180	**168**	280	280	504	504	840	840				
4.1 to 5 cts.				60	150	60	150	**138**	230	230	414	414	690	690				
more than 5 cts.				45	120	45	120	**108**	180	180	324	324	540	540				
Maximum gross monthly service charge to Summer cottages. Where the rates are below these standards, they are indicated in each instance by†				$ c. 1.11	$ c. 1.56	$ c. 1.11	$ c. 1.56	$ c. **1.56**	$ c. 1.56	$ c. 2.50	$ c. 2.78	$ c. 2.78	$ c. 3.33	$ c. 3.33	First energy rate	Second energy rate	Rate for all additional	
				Gross monthly service charge to regular consumers														
NIAGARA SYSTEM																		
				$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Acton	N5 D1	14.70	46	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Ailsa Craig	N4 D7	45.45	114	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Alvinston	N18 D9	33.95	78	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Amherstburg	N15 D3	97.14	811	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Aylmer	N11 D2	230.53	1282	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Ayr	N12 D4	36.95	132	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Baden	N7 D1	128.81	624	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Beamsville	N44 D3	217.67	1901	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Belle River	N15 D2	57.00	534	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Blenheim	N14 D3	97.46	540	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Bond Lake	N3 D3	203.37	2,071	1.10	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
				†1.10	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Bothwell	N14 D10	94.53	328	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Brampton	N13 D2	83.32	281	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Brant	N12 D1	186.71	996	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Brigden	N18 D8	86.74	254	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Burford	N12 D2	93.00	448	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Caledonia	N2 D5	167.56	889	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Chatham	N14 D1	218.63	1,244	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Chippawa	N1 D7	33.16	242	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Clinton	N8 D11	99.53	538	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10

Delaware	N4	D3	175.45	852	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Dorchester	N4	D1	142.04	773	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Dresden	N14	D12	89.98	311	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Drumbo	N12	D5	88.53	413	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Dundas	N2	D1	160.60	1,029	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.25	0.75	10
Dunnville	N1	D9	72.95	391	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
					§1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
					§§1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Dutton	N11	D3	95.05	307	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	3.78	3.33	3.33	6	2	0.75	10
Elmira	N7	D3	33.15	125	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Elora	N5	D4	83.68	383	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Essex	N15	D7	140.72	708	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Exeter	N4	D6	109.44	892	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Forest	N18	D6	100.51	402	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Galt	N6	D2	52.60	437	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Georgetown	N5	D2	75.80	359	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Goderich	N8	D2	65.69	266	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Grantham	N44	D1	64.80	923	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
					†1.00	1.50	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Guelph	N5	D3	147.80	820	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Haldimand	N2	D8	161.09	729	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Harriston	N8	D5	25.84	77	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Harrow	N15	D4	81.44	833	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Ingersoll	N10	D3	220.11	810	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5.5	2	0.75	10
Jordan	N44	D2	48.13	458	1.06	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
					†1.06	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Keswick	N3	D5	77.49	1,366	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Kingsville	N15	D5	176.66	1,863	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	2	0.75	10
					†1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Listowel	N8	D8	96.15	430	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
London	N4	D2	220.43	2,717	0.90	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
					†0.90	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Lucan	N4	D5	86.24	264	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Lynden	N2	D2	81.23	342	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Markham	N3	D1	162.74	1,315	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Merlin	N14	D15	127.03	514	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10

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*See footnote on page 89. †Summer cottage rates. §Lowbanks extension regular rates. §§Lowbanks extension summer cottage rates.

RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1938—Continued.

Rural power district	Rural rates																	
	Class...........			1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	Gross consumption charges			Prompt payment discount
	Property number	Miles of line	No. of consumers	Gross monthly service charge to regular consumers											First energy rate‡	Second energy rate‡	Rate for all additional	
NIAGARA SYSTEM—Continued																		
				$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Milton..............	N13 D3	97.95	471	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Milverton............	N8 D9	59.64	240	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Mitchell..............	N8 D7	93.02	461	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4.5	2	0.75	10
Newmarket...........	N3 D4	93.34	582	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Niagara..............	N1 D1	59.20	437	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Norwich..............	N10 D1	157.53	778	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Oil Springs...........	N18 D3	48.86	195	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Palmerston...........	N8 D6	60.41	201	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Petrolia..............	N18 D5	35.13	153	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Preston..............	N6 D1	175.70	1,379	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.25	0.75	10
Ridgetown............	N14 D2	126.28	858	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
St. Jacobs............	N7 D2	92.77	479	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
St. Marys............	N9 D1	177.64	686	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
St. Thomas...........	N11 D1	220.16	1,487	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Saltfleet.............	N17 D1	102.68	1,984	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Sandwich.............	N15 D1	146.58	2,466	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	1.5	0.75	10
				†1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Sarnia................	N18 D4	112.87	1,683	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Scarboro.............	N3 D2	107.26	1,288	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Seaforth.............	N8 D10	24.56	174	1.10	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
				†1.10	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Simcoe...............	N12 D6	126.93	755	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Stamford.............	N44 D4	9.89	280	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Stratford.............	N8 D4	53.96	278	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Strathroy.............	N4 D4	134.62	435	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Streetsville...........	N13 D1	125.94	620	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Tavistock.............	N8 D1	129.20	490	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10

Thamesville	N14	D11	108.03	434	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Tilbury	N14	D14	137.04	576	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Tillsonburg	N10	D4	183.61	996	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	2	0.75	10
Wallaceburg	N14	D13	177.19	974	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Walsingham	N12	D7	263.03	1,347	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Walton	N8	D3	86.23	410	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Waterdown	N2	D3	84.69	1,094	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	2.5	1	0.75	10
Waterford	N12	D3	129.87	566	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Watford	N18	D7	42.99	148	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Welland	N1	D5	315.45	3,370	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
					†1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Woodbridge	N16	D1	251.16	1,395	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	2	0.75	10
Woodstock	N10	D2	180.38	905	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	2	0.75	10

Total, Niagara system......10,021.37 65,537 *See footnote on page 89. †Summer cottage rates. ‡See heading to first page of table.

GEORGIAN BAY SYSTEM

					$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Alliston	S32	D1	51.64	255	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Arthur	E13	D2	8.46	24	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Bala	GB13	D1	64.15	437	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Barrie	S4	D1	97.55	786	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Baysville	M10	D1	43.75	272	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Beaumaris	M7	D1	67.53	478	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Beaverton	W2	D1	53.84	523	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Beeton	S33	D1	1.80	5	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Bradford	S37	D1	50.53	164	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Bruce	E19	D1	150.37	655	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Buckskin	S24	D1	1.75	23	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Cannington	W3	D1	33.51	127	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Chatsworth	E3	D1	....	19	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Cookstown	S35	D1	2.98	5	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Creemore	S10	D2	100.77	341	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Dundalk	E5	D1	28.59	81	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Elmvale	S7	D1	51.98	257	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5.5	2	0.75	10
Flesherton	E1	D1	20.50	108	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Gravenhurst	G34	D1	14.17	62	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Hawkestone	S9	D1	73.53	405	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10

RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1938—Continued.

Rural power district	Rural rates																		
	Class				1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	Gross consumption charges			Prompt payment discount
	Property number		Miles of line	No. of consumers	Gross monthly service charge to regular consumers											First energy rate‡	Second energy rate‡	Rate for all additional	
					$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Holstein	E7	D1	2.90	16	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Huntsville	M2	D1	91.55	465	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Innisfil	S31	D1	45.55	973	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Kirkfield	W6	D1	24.96	110	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Lucknow	E24	D1	9.18	39	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Mariposa	W9	D1	63.14	399	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Markdale	E1	D2	25.05	107	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Meaford	G14	D1	59.77	301	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Medonte	S18	D1	72.02	315	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Midland	S1	D1	80.78	607	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Minden	G37	D1	51.66	266	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Neustadt	E8	D1	12.06	35	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Nottawasaga	S5	D1	19.87	145	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Orangeville	E12	D1	96.01	312	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Owen Sound	E2	D1	41.32	206	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Port Perry	W12	D1	62.22	532	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Ripley	E24	D2	71.07	213	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Sauble	E46	D1	32.50	237	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Shelburne	E10	D1	25.24	82	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
South Falls	M1	D1	0.60	16	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Sparrow Lake	W1	D1	53.38	513	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Tara	E15	D1	56.31	235	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Thornton	S36	D1	11.81	43	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Tottenham	S34	D1	11.46	33	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Utterson	M8	D1	51.90	268	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Uxbridge	W11	D1	74.83	277	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Wasaga Beach	S10	D1	25.78	1,093	†1.00	1.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.5	1.5	....	10
Wroxeter	E22	D1	52.27	387	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Total, Georgian Bay system			2,142.39	13,252															

*See footnote on page 89. †These rates apply to regular consumers and summer cottages.

‡See heading to first page of table.

EASTERN ONTARIO SYSTEM

Alexandria	L15	D1	52.85	240	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Arnprior	QM10	D1	10.97	85	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Belleville	C38	D1	149.01	1,010	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3.5	1.5	0.75	10
Bowmanville	C23	D1	58.58	275	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Brighton	C6	D1	16.41	96	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Brockville	L3	D1	144.97	977	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Campbellford	C11	D1	46.63	160	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Carleton Place	H5	D1	34.57	118	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Chesterville	L5	D1	139.91	737	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Cobourg	C13	D1	161.03	793	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Colborne	C7	D1	78.21	393	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Cornwall	L1	D1	25.25	53	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Fenelon Falls	C30	D1	109.50	680	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Iroquois	L9	D1	106.79	533	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Kemptville	H9	D1	7.97	73	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Kingston	C44	D1	250.94	1,461	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Lakefield	C18	D1	62.85	261	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Madoc	C33	D1	24.08	86	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Marmora	C47	D1	4.28	32	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Martintown	L13	D1	62.28	302	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Maxville	L14	D2	159.48	815	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Millbrook	C25	D1	31.47	178	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Napanee	C43	D1	244.03	1,083	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Nepean	T1	D1	244.13	1,569	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.5	0.75	10
Newcastle	C22	D1	44.85	179	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Norwood	C31	D1	39.44	203	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Omemee	C26	D1	23.55	49	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Oshawa	C24	D1	187.23	2,187	1.00	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	3	1.75	0.75	10
					†1.00	1.56	1.11	1.56	**1.56**	1.56	2.50	2.78	2.78	3.33	3.33				
Pembroke	QM30	D1	13.20	42	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Perth	H2	D1	71.63	314	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Peterborough	C20	D1	110.50	1,409	0.63	1.11	0.79	1.11	**1.11**	1.56	2.01	2.57	2.78	3.33	3.33	4	2	0.75	10
					†0.63	1.16	0.79	1.21	**1.56**	1.56	2.01	2.57	2.78	3.33	3.33				
Prescott	L2	D1	69.71	327	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Renfrew	QM16	D1	45.00	272	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Smiths Falls	H3	D1	96.30	619	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Stirling	C35	D1	52.84	193	1.11	1.11	1.11	1.11	**1.11**	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10

RURAL POWER DISTRICTS—MILES OF LINE, NUMBER OF CONSUMERS AND RATES—OCTOBER 31, 1938—Concluded.

Rural power district	Property number	Class	Miles of line	No. of consumers	Rural rates 1B	1C	2A	2B	3*	4	5	6A	6B	7A	7B	Gross consumption charges First energy rate‡	Second energy rate‡	Rate for all additional	Prompt payment discount
					Gross monthly service charge to regular consumers														
					$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	cents	cents	cents	%
Sulphide	C34	D1	16.64	78	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Trenton	C3	D1	86.79	394	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	5	2	0.75	10
Warkworth	C49	D1	11.81	51	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Wellington	C45	D1	229.39	999	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Williamsburg	L7	D1	47.42	238	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Total, Eastern Ontario system			3,372.49	19,564															
THUNDER BAY SYSTEM																			
Fort William	P10	D1	85.01	373	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Port Arthur	P2	D1	41.23	241	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	4	2	0.75	10
Total, Thunder Bay system			126.24	614															
MANITOULIN RURAL POWER DISTRICT																			
Manitoulin	MR1	D1	89.85	389	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
NORTHERN ONTARIO PROPERTIES—NIPISSING DISTRICT																			
North Bay	Z4	D1	26.74	542	0.87	1.11	1.01	1.11	1.11	1.56	2.17	2.68	2.78	3.33	3.33	6	2	0.75	10
					†0.87	1.38	1.01	1.38	1.44	1.56	2.17	2.68	2.78	3.33	3.33				
Powassan	Z8	D1	5.10	23	1.11	1.11	1.11	1.11	1.11	1.56	2.50	2.78	2.78	3.33	3.33	6	2	0.75	10
Total, Nipissing district			31.84	565															

*See footnote on page 89. †Summer cottage rates. ‡See heading to first page of table.

Total, all systems: Miles of line, 15,784.38. §Number of consumers, 99,921. *See footnote on page 89. ‡See heading to first page of table. †Summer cottage rates. §This total includes 748.62 miles of primary line under construction on October 31, 1938 and service to 2,512 new consumers was not completed until after the end of the fiscal year.

CLASSIFICATION OF SERVICES FOR RURAL POWER DISTRICTS

When contracts between the consumer and the township have been executed, users of power in townships are supplied with electric service under general classes, according to the requirements and conditions of the individual consumer, as follows:

Class	Service	Class demand kilowatts	Phase	Volts	Fuse rating amperes (maximum)
1B	Hamlet Lighting	1.32	1	110	20
1C	" "	2	1	220–110	35
2A	House Lighting	1.32	1	110	20
2B	Small Farm Service	2	1	220–110	35
3	**Light Farm Service**	**3**	**1**	**220–110**	**35**
4	Medium Farm Service	5	1	220–110	50
5	" " "	5	3	220–110	35
6A	Heavy Farm Service	9	1	220–110	100
6B	" " "	9	1 and 3	220–110	60
7A	Special Farm Service	15	1	220–110	According to load
7B	" " "	15	1 and 3	220–110	According to load

Class 1: Hamlet Service—Includes service to consumers (other than farm and power users) in hamlets, where four or more consumers are served from one transformer. Service is given under two sub-classes as follows:

> **Class 1-B:** Service to residences or stores, including use of portable appliances, and permanently installed appliances not exceeding 1,320 watts.
>
> **Class 1-C:** Service to residences or stores with electric range or ordinary permanently installed appliances greater than 1,320 watts. Where a combination of residence and store can be supplied from one service, the combination is billed as a single Class 1-C consumer. Special or unusual loads will be treated specially.

Class 2-A: House Lighting—Includes service to all consumers other than farm and power users that cannot be grouped as in Class 1.

Class 2-B: Farm Service, Small—Includes service for lighting of farm buildings, power for miscellaneous small equipment and power for single-phase motors not exceeding 2 horsepower and electric range if motors and range are not used simultaneously, on a farm of fifty acres or less.

Class 3: Farm Service, Light—Includes service for lighting of farm buildings, power for miscellaneous small equipment and power for single-phase motors not exceeding 3 horsepower and electric range if motors and range are not used simultaneously.

Class 4: Farm Service, Medium Single-Phase—Includes service for lighting of farm buildings, power for miscellaneous small equipment, and power for single-phase motors up to 5 horsepower demand and electric range if motors and range are not used simultaneously.

Class 5: Farm Service, Medium 3-Phase—Includes service for lighting of farm buildings, power for miscellaneous small equipment and power for 3-phase motors up to 5-horsepower demand and electric range if motors and range are not used simultaneously.

Class 6: Farm Service, Heavy—Includes service for lighting of farm buildings, power for miscellaneous small equipment and power for motors up to 5-horsepower demand and an electric range, or 10-horsepower demand without an electric range. Single- or three-phase service will be given at the discretion of The Hydro-Electric Power Commission of Ontario.

Class 7: Farm Service, Special—Includes service for lighting of farm buildings, power for miscellaneous small equipment, power for 3-phase motors from 10- to 20-horsepower demand and electric range. Single- or three-phase service will be given at the discretion of The Hydro-Electric Power Commission of Ontario.

Note: Classes 2B to 7B are designed primarily to cover the service requirements of farmers. Consumers other than farmers who require a more comprehensive service with greater demand than is provided for in classes 1B. 1C and 2A may obtain this service upon payment of the specified service charge listed in the table of rates.

Note: Class 2B is the service usually supplied to farms of fifty acres or less and Class 3 is the service usually supplied to larger farms. More than 90 per cent of new contracts for farm service are in one or other of these classes.

SECTION IV

HYDRAULIC ENGINEERING AND CONSTRUCTION

Co-operative Systems

The Niagara and Georgian Bay systems claimed special attention in connection with hydraulic engineering and construction during the year, the former on account of the destruction caused by ice at the Ontario Power plant and the menacing ice jam at Queenston, and the latter due to the construction of the Ragged Rapids plant on the Muskoka river. In the Georgian Bay system also, renewals and betterments were carried out at the main dam at Eugenia falls.

An investigation was made of flooding in the Thames valley, and of possible remedial works.

Northern Ontario Properties

In the Sudbury district the major item was the construction of a new concrete dam at the Coniston development. The remaining parts of the old dam at the McVittie development were removed and certain site improvements were carried out. Improvements were also made at the Crystal Falls plant on the Sturgeon river.

The Frederick House dam, built to store water for the benefit of the plants on the Abitibi river, was completed in the spring of 1938, in time to impound sufficient of the spring run-off to fill Frederick House and Night Hawk lakes.

The Kenogami dam below Long lake also was completed in the spring, and work progressed on the diversion channel and control dam south of the lake.

Further investigations of sources of power for mining districts in northern Ontario were carried out.

NIAGARA SYSTEM

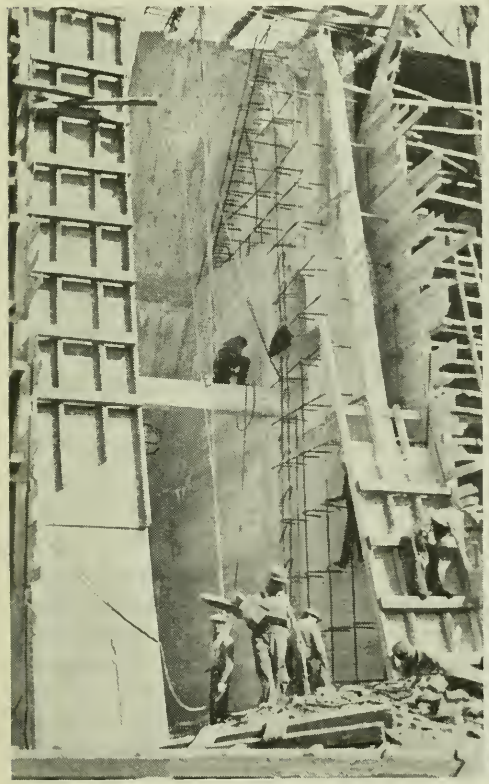
During an exceptionally severe storm on January 24 and 25, 1938, with a strong southwest wind on lake Erie, which caused the level at Port Colborne to rise approximately three feet above the mean for the month, enormous quantities of ice were carried into the Niagara river, causing an ice jam in the neighbourhood of Queenston of a magnitude greater than any since 1909, and exceeding the 1909 jam in the Maid of the Mist pool. The water level at the Ontario Power plant rose at least 45 feet above normal level, flooded the plant, and filled the generating station with ice to the level of the crane rail for about 300 feet of its length at the south end. The plant was completely out of service for three months while damaged equipment was being repaired.

In the lower Niagara river the jam was so severe as to cause the water level at the Queenston plant to rise to elevation 275.3, or approximately 30 feet above the normal level. This plant has been subjected to high water on other occasions and was designed to be secure against water levels up to elevation 297, or more than 50 feet above normal river level.

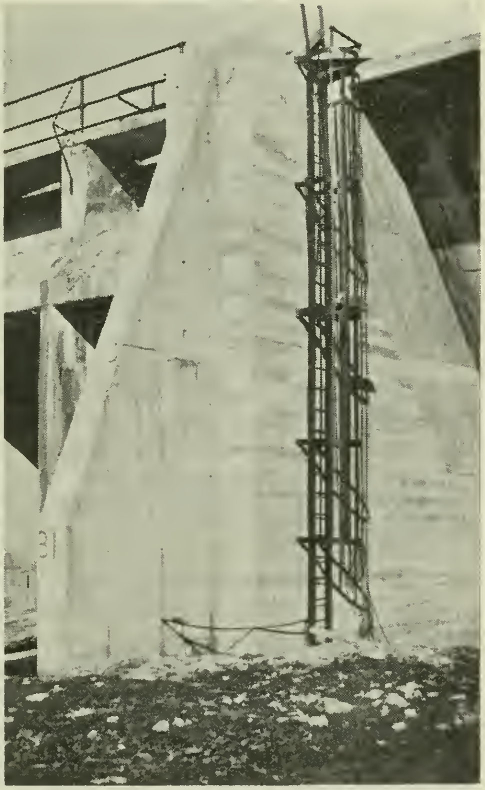
The level at Queenston fell gradually during the first half of February, reaching elevation 248.2 by the fifteenth, and the lower river was clear of ice by March.

GEORGIAN BAY SYSTEM

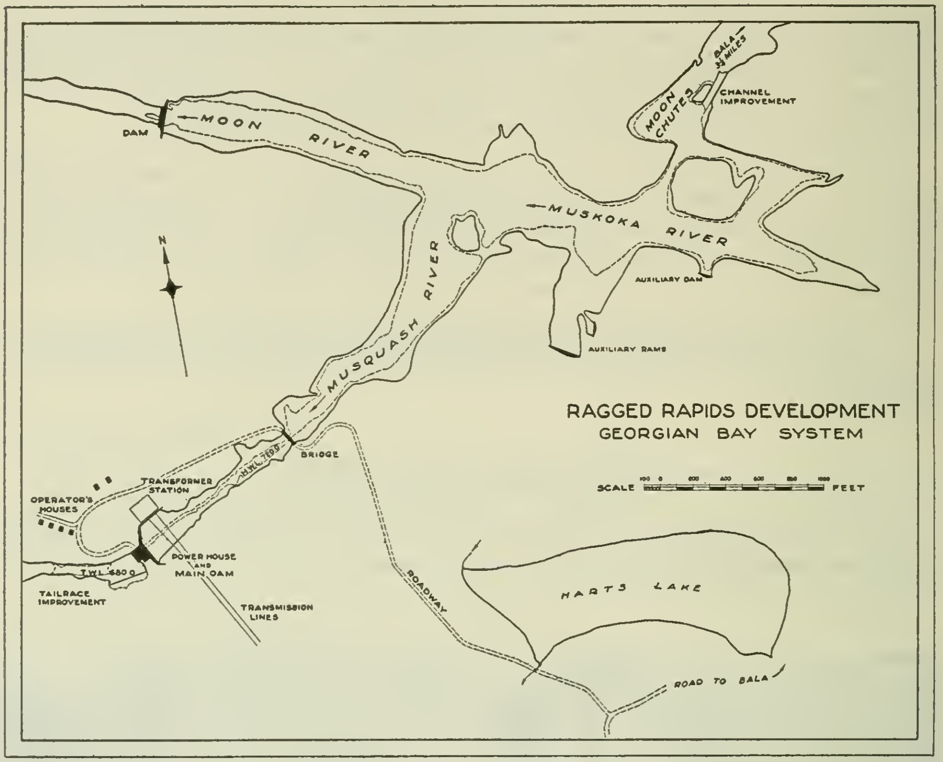
A detailed inspection was made of the concrete in the main dam at Eugenia Falls, and necessary repairs and renewals carried out.



EUGENIA FALLS DAM
Repairs to structure by reinforcing piers



EUGENIA FALLS DAM
Completed repair to one pier

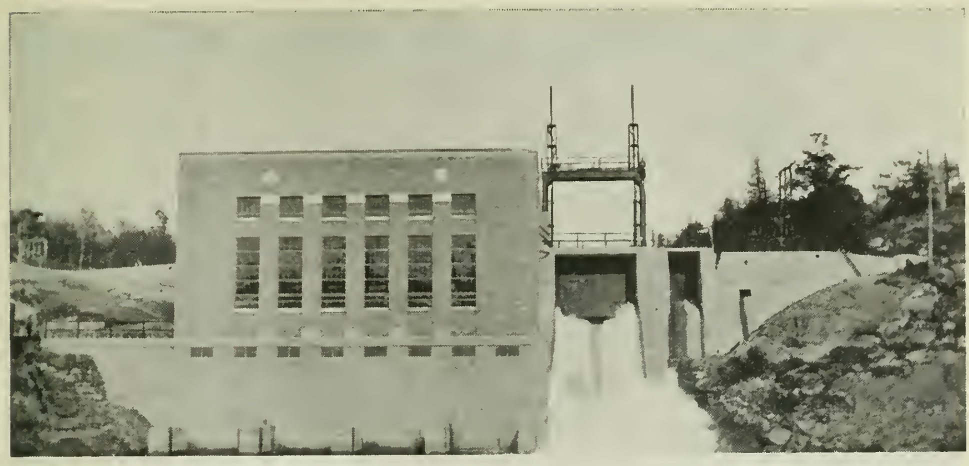

RAGGED RAPIDS DEVELOPMENT
GEORGIAN BAY SYSTEM
SCALE 100 0 200 400 600 800 1000 FEET
N
DAM
MOON RIVER
MOON CHUTES
BALA — MILES
CHANNEL IMPROVEMENT
MUSKOKA RIVER
AUXILIARY DAM
AUXILIARY DAMS
MUSQUASH RIVER
H.W.L. 720.0
BRIDGE
TRANSFORMER STATION
OPERATOR'S HOUSES
POWER HOUSE AND MAIN DAM
T.W.L. 680.0
TAILRACE IMPROVEMENT
TRANSMISSION LINES
ROADWAY
HARTS LAKE
ROAD TO BALA

Ragged Rapids Development

Reference was made in the last Annual Report to the beginning made in the spring of 1937 on the building of the Ragged Rapids development, about 5 miles below the outlet of lake Muskoka at Bala. The plant was completed in the fall of 1938, unit No. 1 first carrying commercial load on November 7, and unit No. 2 on October 18. A description of the main features of the plant follows:

The Georgian Bay system now derives its power supply from eleven hydro-electric plants, having a total capacity, including the new plant at Ragged rapids, of 35,800 horsepower. In addition, power is obtained from the Niagara system through a frequency changing unit at Hanover, having a capacity of 8,000 to 9,000 horsepower. The system peak load during 1938 was 35,500 horsepower.

The drainage area of the main branch of the Muskoka river at Moon chute, 5 miles below Bala, is 1,860 square miles. The water supply is derived from three principal sources: the south branch of the Muskoka river which drains the Lake of Bays area; the north branch which drains the area north and east of Huntsville; and the Muskoka lakes area which includes lakes Joseph, Rosseau and Muskoka. The total drainage then discharges at the outlet of lake Muskoka at Bala, where the Provincial Department of Public Works maintains a regulating dam. A short distance below Moon chute the river forks into two branches, the Moon river discharging to the northwest, and the Musquash west, into Georgian bay.

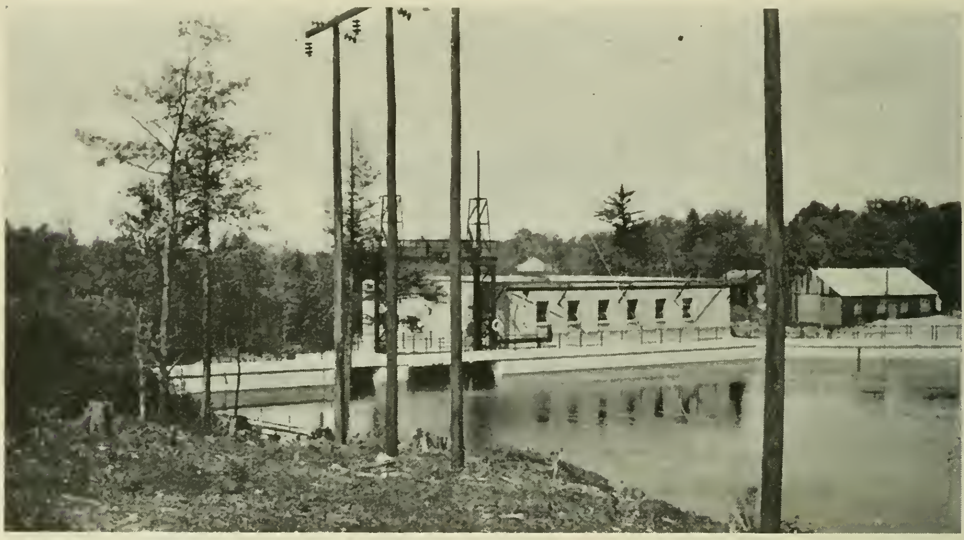


RAGGED RAPIDS GENERATING STATION—MUSQUASH RIVER
Sluice gate and downstream face of generating station

Although the three Muskoka lakes and Lake of Bays are large natural storage basins, the outflow at Bala is subject to considerable variation due to the necessity of maintaining navigation levels on these lakes. Upstream from Lake of Bays, however, the Commission controls 50,000 acre-feet of storage in Hollow lake, and water from this reservoir can be used through the three plants on the South Muskoka river as well as in the plants at and down-stream from Bala.

The total head between lake Muskoka and Georgian bay is approximately 160 feet, of which 20 feet occurs at Bala. Two small plants owned and operated by the Commission are situated here, using only a part of the available flow. An examination of the topography of the Moon and Musquash rivers showed that the latter affords more favourable sites for power concentrations than the former. After development, the Moon river will be available for the discharge of surplus flood flows. The complete scheme of development for the river will comprise four power plants below Bala, with capacities totalling 35,000 horsepower. This, with 5,000 horsepower at Bala, which is the full capacity of that site, will give a total of 40,000 horsepower on the river between lake Muskoka and Georgian bay.

The Ragged Rapids development comprises a combined dam and power house at the foot of Ragged rapids on the Musquash river, where formerly a 30-foot drop occurred, and a diversion dam on the Moon river, a short distance below the forks. These structures flood out Moon chute, where a 10-foot fall existed. Three small dams were also required on the south bank near the forks to close off low areas. A 40-foot wide channel was excavated at upper Moon chute to reduce hydraulic losses in supplying water to the power house and to prevent natural levels being exceeded in the river below Bala during flood flows. A short tailrace channel carries the power house discharge to the pool below Ragged rapids. A roadway, about one mile in length, was constructed from the existing road on the south side of the river to the power house site. A 60-foot plate girder span was required to carry the roadway across the Musquash river at the head of Ragged rapids.



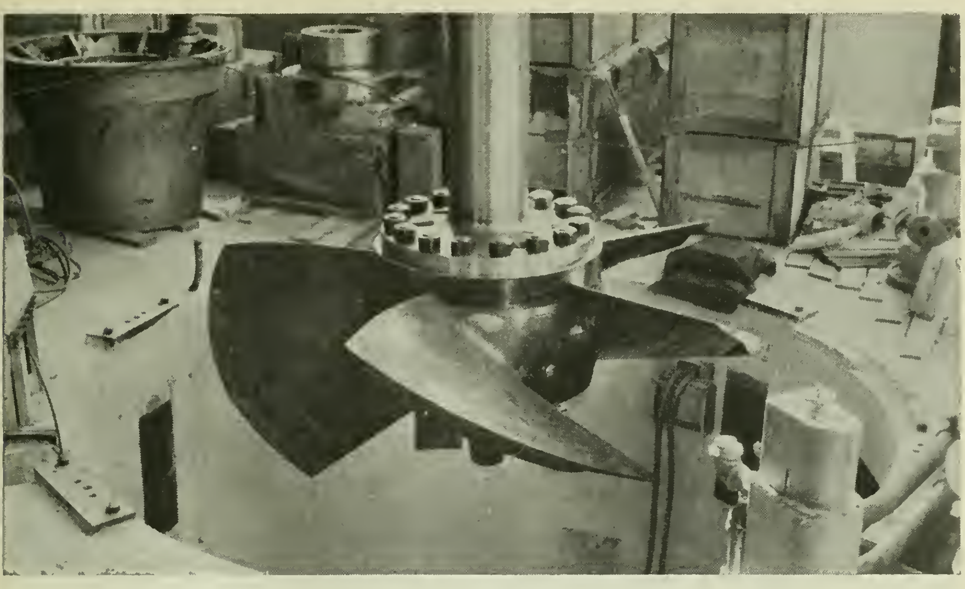
RAGGED RAFIDS POWER DEVELOPMENT—MUSQUASH RIVER
Forebay and headworks

The Moon river dam is a concrete structure, having a total length of 251 feet and a maximum height from foundation to deck of 26 feet. The central portion, 148 feet in length, contains eight sluices, each having a clear width of 14 feet, closed by stop-logs, for the operation of which a power-driven spud winch is provided. Bulkhead walls at either end of the sluiceway section have a combined length of 103 feet, the top width being 3 feet and the back batter 7½:12. To assure free passage of flood waters, sufficient material was excavated under and opposite the sluiceway section to provide the same cross-sectional area as the river cross-section at the site before the dam was built.

Adjoining the power house is a sluiceway opening, 20 feet wide, with sill 15 feet below normal water level, controlled by a motor-operated steel gate, which has been housed and electrically heated for winter operation. A log-slide intake is also provided. Bulkhead wing walls, with 3-foot top width and 8:12 back batter, complete the main dam.

The power house substructure is of the standard reinforced concrete type with two intake openings for each unit containing steel racks and headgates Spiral scroll cases and elbow draft tubes convey the water to and from the turbines. Air ducts are provided below the power house floor level to supply cooling air to the generators. The overall length from the face of the intake to the end of the draft tubes is 90 feet, and the width 73 feet. Centre lines of units are 35 feet apart.

Because of the large variation in river flow, automatically adjustable blade runners were installed. The turbines supplied are rated at 5,200 horsepower under 38 feet of head and operate at 200 revolutions per minute. The 5-blade, fully-machined Kaplan runners are expected to give high efficiencies over a wide range in load and discharge. The servomotor controlling the adjustable blades of the turbine runner is built into the turbine shaft. Oil-pressure governors are used to control the units with pressure and sump tanks interconnected.



RAGGED RAPIDS GENERATING STATION—MUSQUASH RIVER
Turbine runner with moveable blades. Hub contains the actuating mechanism

The power house superstructure is of structural steel, brick and tile construction. The roof area is 73 feet by 65 feet. There are three galleries on the up-stream side of the generator room. On the lower gallery are situated the control room, water pumps and station service transformers. On the second gallery are the battery room, storage room for spare generator coils and parts, work shop, battery charging motor-generator set, and domestic water chlorinator. The top gallery contains the 6,600-volt metal clad switchgear and the headgate hoists. A 25-ton motor-operated crane is provided in the generator room.

The two vertical generators are each rated at 4,500 kv-a, 85-per-cent powerfactor, 6,600 volts, 200 revolutions per minute, 60 cycles, and have 70-kw, 125-volt main exciters and 4-kw, 125-volt pilot exciters direct connected thereto. Mounted above the pilot exciter is the "oil head" for the servomotor, built into the turbine shaft at the coupling, which operates the adjustable blades of the turbine runner.

Construction of the development was commenced in May, 1937. It was evident that water transportation from Bala to the site would be very desirable. Accordingly, two temporary timber dams were built to drown out Moon chute. The first of these, having five sluiceways, was on the Moon river above the site of the Moon river dam, and served as an unwatering dam. The second was on the Musquash river at the head of Ragged rapids. At the same time the excavation at upper Moon chute was proceeded with to provide navigable velocities there and to regain at the power house the fall formerly occurring at the chute. A siding was constructed at Bala, with a derrick and special unloading facilities for handling sand, stone and cement direct from the cars to scows. By the middle of August, 1937, these facilities were complete, and the delivery of concrete aggregate began.

RAGGED RAPIDS DEVELOPMENT—MOON RIVER DAM

From upstream side of dam with river in flood. More than 11,000 cubic feet of water per second passing through the dam

Power house excavation was carried out in the dry, as the river flow was confined to the Moon river. The main dam and the power house substructure were completed early in April, and the sluice gate was opened to pass water for log-driving on the lower reaches of the Musquash river. Work on the Moon river dam proceeded progressively across the river. An exceptionally high fall flow in the river necessitated suspension of work on this dam during November and December, but it was completed in March before the spring freshet.

At the power house and the Moon river dam, concrete was placed with a "pumpcrete" machine, which takes the concrete from the mixer and delivers it through a steel pipe to the forms.

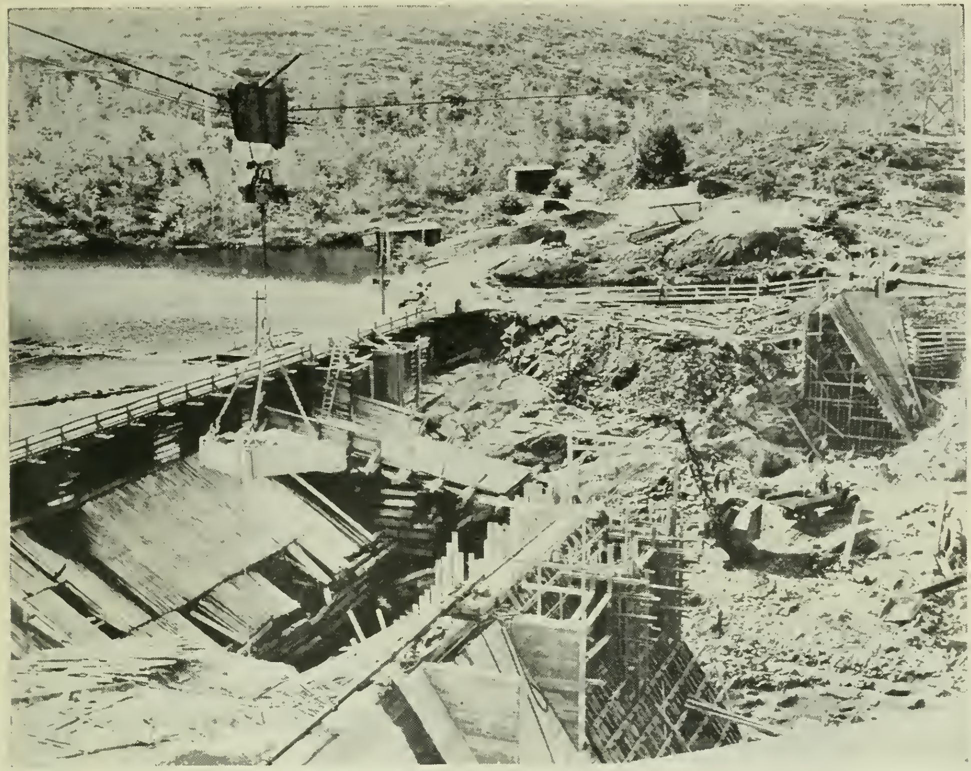
The principal quantities involved in the construction of the development were:

Cofferdams	4,800 cubic yards
Rock excavation	13,500 cubic yards
Concrete	9,900 cubic yards
Transportation	26,500 tons

The Ragged Rapids plant is the first the Commission has constructed in which Kaplan runners are installed, and its operation will therefore be watched with special interest.

With the system load at 35,000 horsepower, this plant will operate at capacity from the time of its completion, the Hanover frequency changer set being available as a standby and to supply energy during times of low-water supply.

The plant was designed and constructed by the Commission's staff. Turbines and governors were supplied by the S. Morgan Smith-Inglis company; generators by the Canadian Westinghouse company; low-voltage switching, switchboard and accessories by the Canadian General Electric company; and the main transformers by the Hackbridge Transformer Company of Canada.



CONISTON DAM—WANAPITEI RIVER
Showing old dam and construction of new concrete dam downstream

NORTHERN ONTARIO PROPERTIES

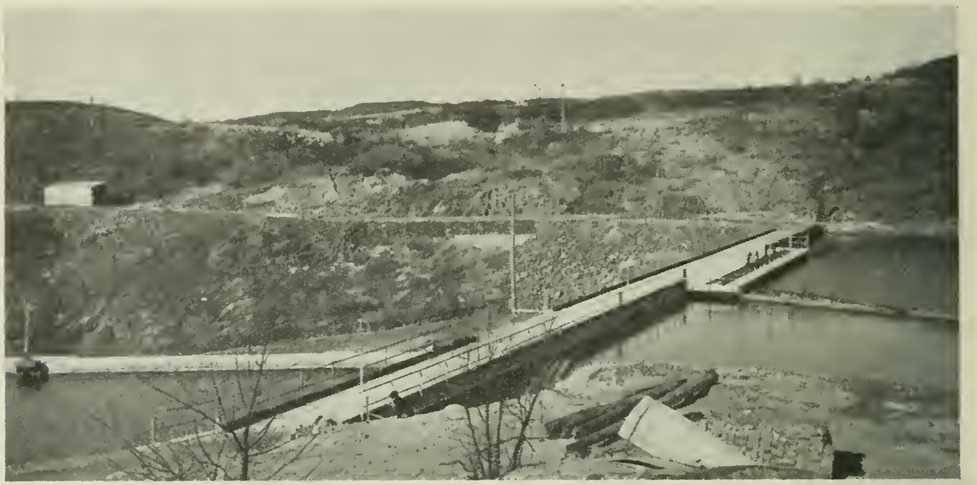
Sudbury District

The rock-filled timber crib at the Coniston plant on the Wanapitei river was replaced by a concrete structure erected 95 feet downstream. Work on the dam was started in June 1938 and completed in October of the same year, the old structure being used as a cofferdam.

The dam consists of four sections: on the north bank is a simple bulkhead; next is the spillway section containing five 16-foot log-controlled sluices; the third is a bulkhead section containing a fishway and log sluice; and connected to the south end of the third section is the new headworks of the power house canal. The dam was designed to carry a 12-foot road over its entire length to give access to the power house and the operators' colony on the south bank of the river.

Rock taken from the dam site was used to widen and grade the existing road on both sides of the dam. Other rock taken from the channel below the dam was used to heighten the tailrace crib at the power house.

The new dam has a total length of 385 feet, a maximum height of 45 feet, and contains nearly 6,000 cubic yards of concrete.



CONISTON DAM —FROM UPSTREAM SIDE
New dam carries a twelve foot roadway across the river. Canal leading to generating station in left foreground

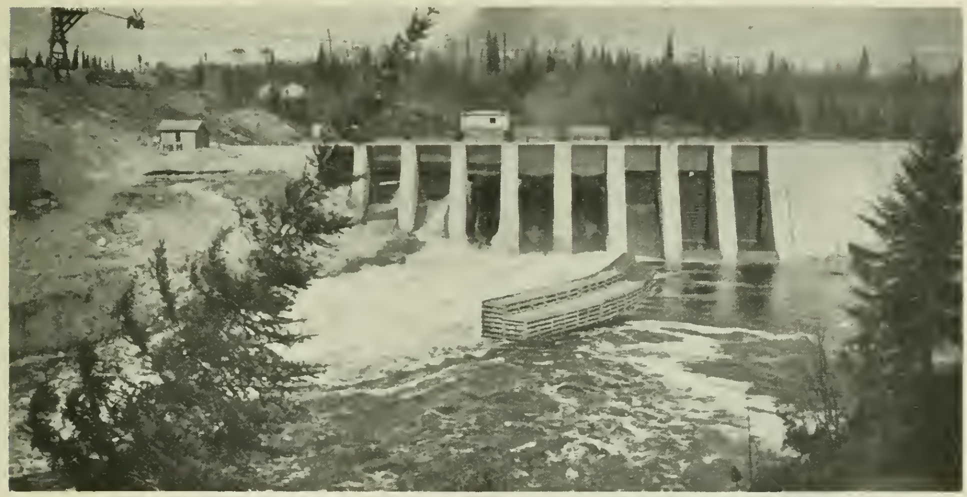
Work at the McVittie power plant on the Wanapitei river, commenced last year, was continued. All the remaining parts of the old dam were removed; protecting booms were placed above the new dam; improvements were made in the road leading to the plant; and minor repairs were carried out at the side dam.

Rehabilitation and betterments proceeded on the Crystal Falls plant on the Sturgeon river, acquired by the Province in August, 1937. All metal work about the dam and power house was cleaned and repainted, thrust and guide bearings were repaired or renewed, covers were made for all openings in the deck of the dam and headworks, the steam heating plant used to facilitate headworks operation was rebuilt, and one of the Taintor gates was housed and heated.

Abitibi District

The Frederick House dam, built to store water in Night Hawk and Frederick House lakes for the benefit of the Abitibi Canyon plant and to maintain navigable depths on Night Hawk lake, was completed in the spring of 1938. The dam is situated on the Frederick House river, a tributary of the Abitibi, at a site about 14 miles below Connaught. Construction was started in April 1937 and completed in May 1938, in time to impound the spring run-off.

Access to the dam site was obtained by constructing a road, 6½ miles in length, from the end of the colonization road west of Nellie lake. Sand for concrete was obtained three miles westerly from the project, while rock at the dam site was crushed to provide the coarse aggregate. Unwatering was accomplished by means of two rock-filled timber crib cofferdams. A wooden flume carried the natural flow of the river past the dam site during construction.



FREDERICK HOUSE DAM AND TRAINING CRIB

The crib prevents discharge from the dam impinging on the unstable left bank (right-hand side in view). There is solid rock along the right bank

TRANSPORTATION IN NORTHERN ONTARIO

Material for construction of Frederick House Dam being transported by tractor and sleighs

The dam consists of four sections. Starting at the right bank is a bulkhead section, followed by nine 16-foot sluices controlled by stop-logs. Adjoining this is another bulkhead section, and finally the fourth section, which extends into the clay bank on the left or south side, consists of six cells formed by driving interlocked steel sheet piling to bed rock. The bank around the cells was heavily rip-rapped, and rock-filled toe cribs were placed on both the upstream and downstream sides. Further protection was given to the south bank by the erection of a training crib, which extends downstream from pier No. 7. This crib diverts most of the flow along the north side of the river channel, where exposed rock gives security from erosion.

The dam has an overall length of 558 feet, a maximum height of 74 feet, and contains more than 17,000 cubic yards of concrete. It is capable of storing 300,000 acre-feet of water and will increase the dependable capacity of the Abitibi Canyon plant by about 40,000 horsepower.

WATER DIVERSIONS

The Long Lac diversion project, which approached completion during the past year, contemplates the diversion southerly to lake Superior of a portion of the flow of the Kenogami river, a tributary to the Albany. The immediate purpose in view is the provision of facilities for the economical transportation to lake Superior of pulp-wood cut in the Kenogami watershed.

The works comprise two concrete dams and a channel 5½ miles long. The north, or control, dam is situated on the Kenogami river, 15 miles below the outlet of Long lake; while the south, or regulating, dam is 5 miles below the upper end of Long lake and connected to it by a channel built across the divide and through a chain of small creeks and lakes.

These two dams, about 82 miles apart, control a drainage area of 1,530 square miles and a storage area of 62.3 square miles, and are capable of diverting an annual average flow of 1,100 cubic feet per second southerly to lake Superior.

Under an agreement with the Provincial government, work was commenced in the summer of 1937, the construction of the channel and the control dam at the south end being let by contract, while the Commission's own organization started work on the Kenogami dam to the north of the lake.

Transportation of equipment to the Kenogami dam site was accomplished by scows built at the railroad; a quarter of a mile of railroad was built across the portage at rapids about 6½ miles downstream from Longlac.

Unwatering of the Kenogami dam site was completed in January, 1938. A portable sawmill, which supplied all necessary timber and lumber, was erected at the dam site. Gravel was obtained from a pit some 6 miles from the dam site. Concreting commenced at the end of January and was completed in May, most of the concrete being poured in sub-zero temperatures.

The dam, which is of the gravity sluiceway type, is 296 feet long and 68 feet high in the centre. It consists of a bulkhead section at each end and a centre section of six 16-foot sluiceways controlled by stop-logs. When in operation the sills will be 22 feet below high water level.

For the construction of the diversion channel and regulating dam, all equipment, including drag-line excavators weighing up to 140 tons, was transported from the railway at Longlac 58 miles up Long lake to the project. Thence, to gain access to all parts of the work, a truck road, 6 miles long, was built.

LONG LAC CONTROL DAM

Showing emergency sluice and log slide. These structures are at the south end of the diversion channel and sixty-seven miles south of Long Lac

KENOGAMI DAM

This dam is situated fifteen miles below the outlet of Long Lake and controls its level

The channel section, designed for a maximum discharge of 2,000 cubic feet per second, was given a depth of 14 feet and width of 100 feet at water line. The cross-section is trapezoidal in some parts and saucer shaped elsewhere, and the sides were generally given a 2:1 slope.

The control works, situated at the south end of the channel, consist of three concrete structures. The centre one contains a single log-controlled sluice and a log sluice with a wooden log chute. On the west side is a simple bulkhead section, while the structure on the other side has two log-controlled sluices. At the end of the fiscal year the control dam was completed and a small amount of work only remained to be done on the channel. The channel is expected to be available for the transportation of pulpwood southerly to lake Superior during the summer of 1939.

HYDRAULIC INVESTIGATIONS

Preliminary plans and estimates were made of the cost of a development at Fourteenth falls on the Sturgeon river, a tributary of the English river, to supply power to the town of Sioux Lookout. This work was a continuation of that referred to on the same subject in the last Annual Report.

At the request of the Provincial government, a study was made of flooding in the valley of the Thames river, and preliminary plans and estimates of the cost of remedial and protective works were submitted.

The routine work of the Hydraulic department includes collection of hydrometric data, supervision of operation of storage basins, engineering work in connection with operation and maintenance of the various systems, and sundry items in connection with lands, contracts and agreements.

SECTION V

ELECTRICAL ENGINEERING AND CONSTRUCTION

(STATION SECTION)

CONSTRUCTION work carried out during the past year provided for the supply of additional power from eastern sources. It also included the erection of a large number of small distributing stations and additions to many of the existing stations to provide capacity for the supply of power to the smaller centres. Many new customers were added in the mining districts.

Co-operative Systems

In the Niagara system two 75,000-kv-a banks of transformers are being installed at Leaside transformer station which will increase the nominal capacity of the station to 420,000 kv-a. A double circuit 110,000-volt line was built between Leaside and Toronto Strachan transformer stations to give an additional tie from the eastern power sources into the Niagara system. While rehabilitating the Ontario Power plant following the damage by ice, many changes were incorporated to facilitate operation. Eight new distributing stations were installed throughout the system and the capacity of seventeen others was increased.

In the Georgian Bay system the new 9,000-kv-a development at Ragged Rapids was completed and one generating unit placed in service. A 3,000-kv-a auto-transformer with automatic on-load tap changing equipment was installed to supply power at regulated voltage to Wasdell district. Additional transformer capacity was installed at eleven of the existing distributing stations.

In the Eastern Ontario system four new distributing stations were installed and the capacity of a like number was increased.

In the Thunder Bay system the 9,000-kv-a Long Lac transformer station was completed for the supply of power to the mining companies in that area. Two new companies were added during the year. A number of houses and colony buildings are being erected at Cameron Falls to provide accommodation for the operators and their families.

A total of over 87 miles of transmission circuits were constructed during the year, 31 miles of which will operate at 132,000 volts. More than 2,400 miles of lines were also built to supply rural customers.

Northern Ontario Properties

The original 28,500-kv-a bank of transformers at Kirkland Lake transformer station is now overloaded and a duplicate bank is being installed, also an additional 15,000-kv-a voltage regulator. A 132,000-volt, 1,000-kv-a transformer station was installed at Bourkes in the township of Benoit. One new distributing station was installed and another was enlarged. Metering equipment was installed for the supply of power to ten new mining companies and the capacity of four existing metering equipments was increased. Nearly 60 miles of transmission circuits were constructed.

Extensive improvements are being carried out and additional houses provided for the accommodation of the operating staff at the isolated stations in the northern districts. Fourteen houses at Abitibi Canyon and seven at Ear Falls are practically completed and many occupied. Schoolhouses, recreation rooms, stores, garages, hospital and other buildings are being included where considered advisable, also water supply, electric service, sewage disposal and fire protection. Roads are being graded and some landscaping done. Houses are also being provided at locations along the power line right-of-way for use by patrolmen.

NIAGARA SYSTEM

Generator and Step-up Transformer Stations on the Niagara River

At Queenston generating station some of the high-voltage oil circuit-breakers are being fitted with improved contacts, additional high-speed relays installed and external tap-changers provided in three of the transformer banks to increase the flexibility of operation and provide better control of the system voltage. Cable connections between a number of the transformers were installed for emergency service in case of flood conditions.

As a result of a severe ice jam in the Niagara river late in January, the Ontario Power plant was completely flooded.* This necessitated the rehabilitation of all the apparatus and the replacement of most of the control and metering equipment. During this period changes were made in the 12,000-volt cable connections and in the control of the generator-excitation system and relay-protection of the generators.

A bank of three 16,000-kv-a transformers originally purchased for Abitibi Canyon generating station was installed temporarily outside Toronto Power transformer station for emergency service. Three duplicate units which had been retained near this station for possible emergency were released and shipped to their original destination.

At Niagara transformer station additional high-speed relays were installed on two 110,000-volt circuits, a set of current-limiting reactors has been relocated and a bank of three 2,400-kv-a transformers, which was released from Thorold transformer station, has been installed to augment the capacity of the 46,000-volt station.

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*See "The Bulletin", June, 1938.

ONTARIO POWER PLANT—NIAGARA RIVER
Ice piled up in river almost to the roof of the generating station—during ice jam, January, 1938

Transformer and Distributing Stations

Niagara District—A combined distribution and municipal station was installed at Welland and placed in service on September 27, 1938. The installation consists of one 3,000-kv-a, three-phase, 46,000/4,000-volt transformer, switching and metering equipment for the distributing station, and a duplicate transformer with the necessary switching equipment for the municipal station.

The 300-kv-a transformers placed in temporary service at Jordan and St. Davids distributing station last year have been permanently installed.

At Smithville distributing station the three original 50-kv-a transformers were replaced with three 100-kv-a units obtained from system reserve.

A distributing station was erected at Beamsville, using a bank of three new 250-kv-a transformers, to replace the original station. The latter was dismantled and the 300-kv-a, three-phase transformer transferred to system reserve.

Hamilton and Dundas District—The installation of a second bank of transformers and switching equipment at Hamilton-Stirton transformer station, reported last year is almost completed and will be in service before the end of the year.

The work at Hamilton Beach transformer station reported under way in the 1937 Annual Report was completed this year.

At Dundas transformer station two 4,000-kv-a, 13,200/26,400-volt auto-transformers are being installed outdoors to provide for the supply of 26,400-volt power over the existing circuit to Caledonia and Hagersville. At present this circuit is operating at 13,200 volts. The transformers have been purchased and the installation should be completed by February 1939.

A bank of three 75-kv-a transformers was installed at Vinemount distributing station to supply 8,000-volt power to Caledonia rural power district.

The necessary changes were made at Caledonia distributing station to enable power to be supplied to the village of Caledonia at 4,000 volts instead of 2,300 volts.

Toronto and York District—The capacity of Toronto-Leaside transformer station is being increased to a rated capacity of 420,000 kv-a. Six new 25,000-kv-a, single-phase, water-cooled, 230,000/138,000-voltage class transformers were purchased and the first bank installed on September 10, 1938. The second bank will be completed and in service in November. The transformers will operate in parallel with the existing transformer banks at the station, for the supply of additional power to the Niagara system. Each bank has a 13,200-volt tertiary winding of 30,000-kv-a rated capacity and may be used to supply power for the operation of the synchronous-condensers at the station. Some of the existing transformer banks were relocated to conform to the revised arrangement of the station. Improvements were made in a number of the existing 220,000- and 110,000-volt oil circuit-breakers, and five new circuit-breakers of the latter voltage class and other necessary switching equipment were purchased for the control of the additional transformer banks and two 110,000-volt circuits down the Don valley and along the water front to Toronto Strachan transformer station. Two sets of 13,200-volt metal-clad equipments were purchased and installed.

During the period of ice trouble in the Niagara river and the flooding of the Ontario Power plant in January 1938, an available bank of three 29,250-kv-a transformers was loaned by Beauharnois Light, Heat and Power Company and installed temporarily at Toronto-Leaside transformer station to provide emergency additional transformer capacity. With the installation of the permanent transformer capacity the temporary bank is now being removed and returned to the power company.

At Toronto-Strachan transformer station three oil circuit-breakers, fifteen disconnecting-switches and relay equipment were purchased and installed and a number of the existing oil circuit-breakers altered to re-arrange the necessary 110,000-volt circuits at the station and terminate a double-circuit line from Toronto-Leaside transformer station.

At Toronto-Bridgman-Davenport transformer station the 90,000-volt indoor oil circuit-breakers which have been in disuse for some time were removed and the space made available for storage of spare equipment. Improvements were made to the overhead-crane. Additional metering equipment was installed to measure the 13,200-volt power supplied to Forest Hill Village municipal station. Metering equipment was also installed in the Toronto Hydro-Electric System's High Level station to measure the 4,000-volt power supply to Forest Hill Village.

At Toronto-Wiltshire transformer station a new 110,000-volt lightning-arrester was installed.

The installation of a bank of three 5,000-kv-a transformers at York transformer station, reported in the 1937 Annual Report, was completed and the equipment placed in service on April 22, 1938.

Additional metering equipment was installed at Newmarket and Port Credit distributing stations.

At Mount Joy distributing station the 26,400-volt disconnecting switches and fuse-units were replaced with drop-out fuses. Recloser drop-out fuses were installed on the Markham and rural 4,000-volt feeders.

A distributing station was erected at Brampton using a bank of three 150-kv-a transformers released from Waterford distributing station. The station was placed in service on September 16, 1938.

Equipment was installed at Clarkson distributing station to provide a 4,000-volt feeder to Oakville (Canada Dehydrated Alfalfa) distributing station. The latter station was installed and placed in service on May 16, 1938. A bank of three 50-kv-a transformers was purchased for the installation.

Metering equipment was installed at the plant of National Steel Car Corporation Limited in Malton to measure the power supplied to that customer.

A distributing station was erected near Green River to supply power to Markham rural power district. A 300-kv-a three-phase transformer released from Ringwood distributing station was installed and placed in service on May 14, 1938.

The 300-kv-a transformer at Ringwood distributing station was replaced by a bank of three new 150-kv-a transformers which was placed in service on April 10, 1938.

The installation of a municipal station at Forest Hill Village, reported in the 1937 Annual Report was completed and the station was placed in service on December 17, 1937.

At Kleinburg distributing station an automatic booster-regulator was installed in the 4,000-volt circuit.

London District—At London transformer station, the installation of the third bank of three 5,000-kv-a transformers referred to in last year's report was completed on June 15, 1938. A 110,000-volt oil circuit-breaker was obtained from Cyanamid transformer station and installed in the line to St. Thomas and the 13,200-volt oil circuit-breakers were reinforced to increase their rupturing capacity. Two new water-pumps with the necessary oil and water-piping were installed. Two 5,000-kv-a, 13,200/26,400-volt auto-transformers are being installed outside the station and will be operated to step-up the voltage to 26,400 volts for the long circuits which terminate at Dashwood and Strathroy. At present these two circuits are operated at 13,200 volts. The transformers have been purchased and the installation should be completed before the spring of 1939.

A distributing station was erected at Ilderton to supply power to the surrounding rural district. A bank of three 150-kv-a transformers obtained from system reserve was installed and the station placed in service on March 13, 1938.

The capacity of Strathroy rural station was increased. The original bank of three 37.5-kv-a transformers was replaced by a bank of three 75-kv-a units which were placed in service on July 10, 1938.

Metering equipment was installed on the 4,000-volt rural feeder from Lucan distributing station to measure the power supplied to the village of Granton.

Guelph District—At Georgetown distributing station a bank of three new 500-kv-a transformers was installed, replacing the original two 300-kv-a, three-phase transformers. The replaced units were transferred to Caledonia and Sheddon distributing stations.

Preston District—At Preston transformer station twelve 13,200-volt disconnecting-switches and ten current-transformers were replaced. The 110,000-volt circuits to the station were rearranged and disconnecting-switches installed in the high-voltage bus to sectionalize the transformer banks.

Metering equipment was installed near the town of Hespeler in the 4,000-volt feeder from Preston rural station to measure the power supplied to Gypsum Lime and Alabastine Company at Glen Christie and to a number of rural customers.

Kitchener District—At Kitchener transformer station improved relaying equipment was installed on the 110,000-volt circuit to Preston transformer station.

The bank of three 150-kv-a transformers at Waterloo rural station was replaced by a bank of three 250-kv-a transformers and the new equipment was placed in service on July 31, 1938.

Stratford District—The capacity of Mitchell rural station was increased on July 12, 1938 with the installation of the second 150-kv-a, three-phase transformer which was obtained from system reserve.

At Dublin distributing station, Mitchell and Clinton rural stations and Moorefield metering station changes were made in the metering equipment.

Assistance was given Stratford Public Utilities Commission in rearranging some of the 26,400-volt and 4,000-volt circuits in the municipal station.

Woodstock District—North Ingersoll distributing station was installed to supply 8,000-volt power to the Ingersoll rural power district. A bank of three new 150-kv-a transformers was purchased and the station placed in service on January 5, 1938.

At Embro distributing station changes were made in the metering equipment and drop-out fuses were installed on the 13,200-volt circuit supplying the station.

St. Thomas District—At Shedden distributing station the transformer capacity was increased. A 300-kv-a, three-phase transformer released from Georgetown distributing station was installed, replacing a 150-kv-a, three-phase unit which was transferred to system reserve. The metering equipment was also changed and drop-out fuses installed in both the 13,200- and 4,000-volt circuits.

At Aylmer distributing station an additional bank of three 250-kv-a transformers was purchased and installed on June 26, 1938 for the supply of 8,000-volt power for the rural load. The 75-kv-a transformers, previously in service on this load. were released and transferred for use at Strathroy rural station.

Brant District—St. George distributing station located inside Brant transformer station was dismantled and the three 50-kv-a transformers transferred to system reserve. A bank of three 150-kv-a transformers was obtained from system reserve and installed outside the transformer station to supply power for this load.

At Waterford distributing station the bank of three 150-kv-a transformers was replaced by a bank of three new 250-kv-a transformers. The new bank was placed in service on May 25, 1938. Drop-out fuses were installed on the 26,400-volt circuit.

A distributing station was installed at Delhi on May 2, 1938, using a bank of three 250-kv-a transformers which had been temporarily installed at St. Williams distributing station.

The installation of the distributing station at Delhi relieved the load on St. Williams distributing station and the temporary increased transformer capacity reported last year was replaced by the original bank of three 150-kv-a transformers.

Mount Pleasant distributing station was installed on June 28, 1938 to supply 4,000-volt power to the south-west section of Brant rural power district using a bank of three new 150-kv-a transformers.

Assistance was given Simcoe Public Utilities Commission in the installation of additional transformer capacity at the municipal station. Two 500-kv-a transformers were purchased and installed with the spare transformer to form the second bank. The installation was completed and the bank placed in service on July 14, 1938.

Kent District—The bank of three 75-kv-a transformers at Thamesville distributing station was replaced by a bank of three 150-kv-a transformers obtained from system reserve.

At Tilbury distributing station a 24-volt storage-battery was installed and changes were made in the relaying and metering equipments.

An additional 4,000-volt feeder was installed at Dresden distributing station to supply power to the rural power district which was previously supplied from the Dresden municipal system. Drop-out fuses were installed in the 26,400-volt circuit.

Changes were made in the metering equipment at Bothwell distributing station.

Essex District—At Harrow distributing station the bank of three 250-kv-a transformers was replaced on June 5, 1938 with a bank of three 500-kv-a units. A 26,400-volt oil circuit-breaker and a 24-volt storage-battery were installed.

The metering equipment in Sandwich Windsor and Amherstburg rotary-convertor station at East Windsor was dismantled.

The capacity of Amherstburg distributing station was increased on July 25, 1938. The 300-kv-a, three-phase transformer was replaced with a bank of three 500-kv-a transformers and the replaced unit was transferred for installation at Wellesley distributing station. Changes were also made in the metering equipment.

St. Clair District—Perch distributing station was replaced by a new station at the rear of Petrolia Waterworks plant. A bank of three new 150-kv-a transformers was installed and placed in service on October 8, 1938. The original station was dismantled and the bank of three 75-kv-a transformers transferred to system reserve. The new station supplies power to Petrolia Waterworks and to Sarnia and Forest rural power districts.

At Oil Springs distributing station the necessary equipment was installed for a three-phase feeder to replace the single-phase feeder supplying power for the rural load.

Changes were made in the Point Edward metering equipment in Sarnia municipal station No. 1.

GEORGIAN BAY SYSTEM

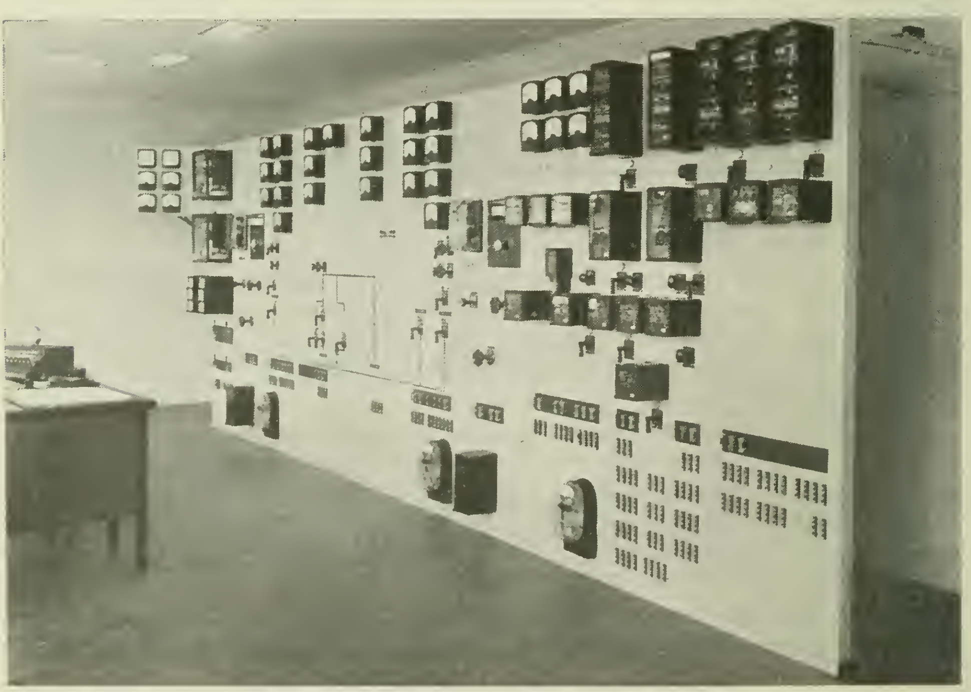
The new development at Ragged Rapids which was reported in 1937 Annual Report was completed and the first unit placed in service on October 18, 1938. The second unit will be in service early in November.

The powerhouse superstructure is of structural steel, brick and tile construction. The roof area is 73 ft. by 65 ft. There are three galleries. On the lower gallery are the control-room, water-pumps and station-service transformers. On the second gallery are the storage-battery and charging-set, domestic-water-chlorinator, work-shop and storage-room for spare parts. The top gallery contains the 6,600-volt metal-clad switch-gear and the head-gate hoists.

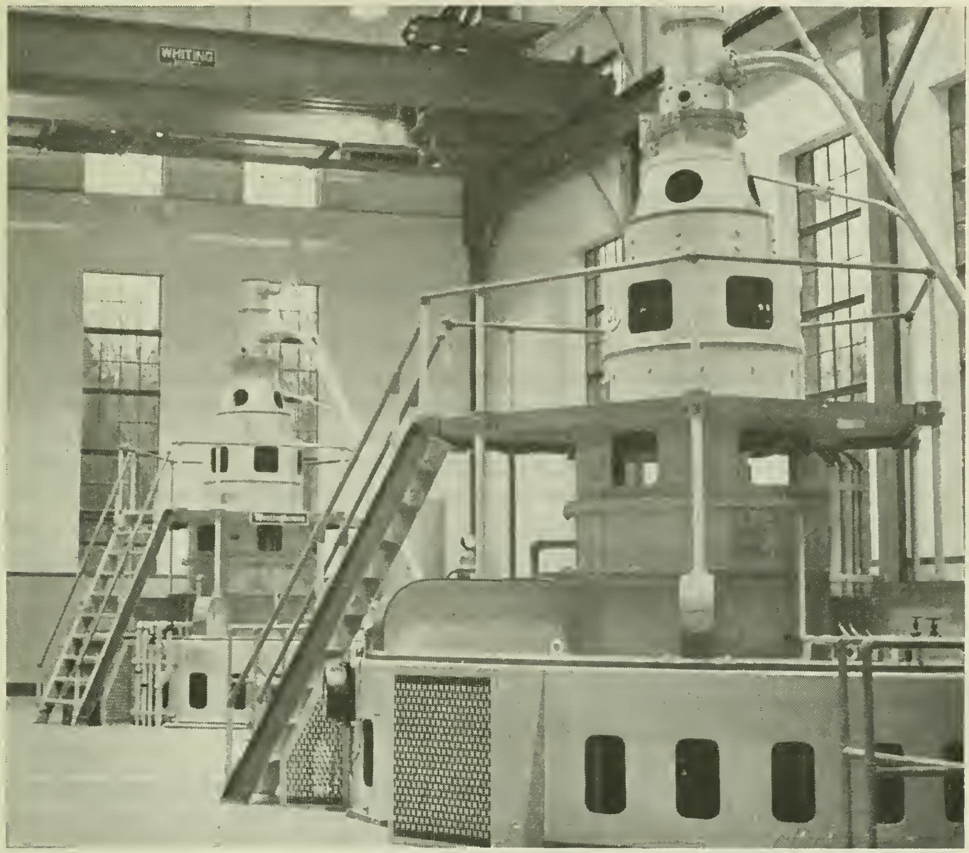
A motor-operated crane of 25-ton capacity is provided for the assembly of the generators and turbines.

The two 4,500-kv-a generators are each equipped with direct-connected main and pilot exciters. Mounted above the pilot exciter is the "oil head" for the control of the adjustable blades of the turbine-runner.

The 6,600-volt, metal-clad switchgear is arranged with special features for safety in the operation and maintenance of the equipment. Mechanical interlocks on the oil-circuit-breaker mechanism and separate removable compartments containing the potential-transformers assures isolation of these parts when required for inspection.



RAGGED RAPIDS GENERATING STATION—MUSQUASH RIVER
Control Board



RAGGED RAPIDS GENERATING STATION—MUSQUASH RIVER
Each 4,500 kv-a generator is surmounted by the main exciter, the pilot exciter, and the servo-motor operating the Kaplan blades

The main switchboard, located in the control-room, has eleven panels and a swing panel, all of stretcher steel painted oyster-shell grey. On this board are mounted all of the indicating and graphic meters, the relays, rheostatic voltage-regulators, generator-temperature-indicators, ground-detectors and annunciators.

The step-up bank of power transformers and 38,000-volt switching equipment are 300-feet from the power house. The structures are of galvanized steel. A transfer-track and truck provide facilities for moving a transformer to the erection building where it may be dismantled if necessary.

The main bank of transformers comprises three 3,000-kv-a, self-cooled units, with spare, which step-up the generator voltage for the supply of power to the system at 38,000 volts.

There are six operators' houses of semi-bungalow type, each having 6 rooms. These houses are equipped with electric service, chlorinated water and septic-tank-type sewage systems.

The single-phase 75-kv-a transformer installed last year at Minden was replaced by a bank of three 37.5-kv-a transformers which were placed in service on June 12, 1938.

Severn District—The transformer capacity at Painswick distributing station was increased. A bank of three 150-kv-a transformers was purchased and installed on June 2, replacing the original bank of three 100-kv-a transformers which was used at Pinedale distributing station.

At Penetang rural station the third 75-kv-a transformer was installed on June 8, to complete a three-phase bank.

Eugenia District—At Eugenia generating station the ventilation of the control room was improved and new telephone equipment was installed.

At Meaford distributing station a bank of three 50-kv-a transformers and the necessary switching and metering equipment was installed to provide an 8,000-volt feeder to supply power to a portion of the Meaford rural power district. As a result of fire damage to equipment in this station and Meaford municipal station, replacements were necessary. Changes were also made in the location of the voltage-regulators and service transformers to better coordinate the two stations and provide for additional feeders.

The 75-kv-a transformer at Kilsyth was replaced by a 150-kv-a transformer released from Pinedale distributing station. The installation was made temporary pending the erection of a new station on the present site. The released transformer was installed and placed in service at Priceville distributing station on October 20, replacing two 10-kv-a, single-phase units. The switching and metering equipment at this station was also replaced with larger capacity equipment.

At Kincardine distributing station a bank of three new 50-kv-a transformers was installed with the necessary switching and metering equipment to provide an 8,000-volt feeder to supply power to a portion of Ripley rural power district.

At Mildmay, Owen Sound and Orangeville rural metering stations and Wingham distributing station much of the equipment was replaced by more suitable equipment.

Wasdell District—A 3,000-kv-a, three-phase, 38,000/22,000-volt auto-transformer was installed at Wasdell Falls auto-transformer station, replacing the original 1,500-kv-a unit, for the supply of power to Wasdell district from the 38,000-volt circuits. The auto-transformer is equipped with on-load tap-changers automatically controlled to regulate the voltage on the Wasdell circuit. The original 1,500-kv-a auto-transformer is stored at the station as a reserve unit. The equipment was placed in service on September 21.

At Wasdell rural station the bank of three 75-kv-a transformers was replaced by a bank of three 150-kv-a units and the necessary changes were made to supply power at 8,000 volts instead of 4,000 volts as formerly. The replaced transformers were transferred for use at Huntsville distributing station.

The 150-kv-a, three-phase transformer at Pinedale distributing station was replaced by a bank of three 100-kv-a transformers released from Painswick distributing station. The necessary switching and metering equipment was also installed for an 8,000-volt feeder to supply power to Mariposa rural power district. The new equipment was placed in service on July 29, 1938.

Muskoka District—The capacity of Huntsville rural station was increased. The original bank of three 50-kv-a transformers was replaced with a bank of three 75-kv-a units recently released from Wasdell Falls rural station.

Bala District—The transformers at Bala generating station were changed from delta to a Y connected bank to supply power to the rural district and Port Carling distributing station at 11,400 volts.

A new distributing station was erected at Port Carling for the supply of power to the village. A bank of three 100-kv-a transformers was purchased and installed with the necessary switching and metering equipment on June 29. The old station was dismantled and the bank of three 75-kv-a transformers transferred to system reserve.

At Bala distributing station the necessary changes were made for the operation of the station at 38,000 volts instead of 22,000 volts as formerly.

EASTERN ONTARIO SYSTEM

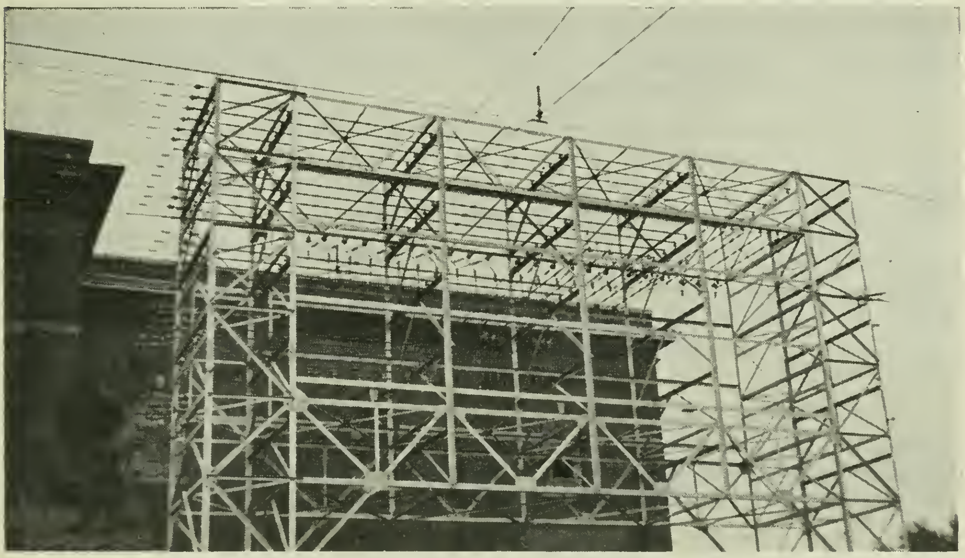
110,000-volt Transformer Stations

At Frontenac transformer station improvements were made to the on-load tap-changing equipment and an automatic-control feature was added. The station was extended and the necessary equipment installed to provide for three 44,000-volt feeders. Two of the feeders tie direct into the new Kingston municipal station and the other to the Central Ontario district at Belleville.

Central Ontario District—At Belleville distributing station No. 1 a 750-kv-a, three-phase transformer was replaced by a 1,500-kv-a unit recently removed from Kingston distributing station. The released transformer was transferred to system reserve.

The capacity of Kingston distributing station was increased. A 3,000-kv-a three-phase transformer was purchased and installed in an existing pocket replacing a 1,500-kv-a unit which was transferred to Belleville distributing station.

The capacity of Oshawa distributing station was increased by the installation of an additional 3,000-kv-a, three-phase transformer. This is the fourth transformer of similar capacity installed in the station.



OSHAWA DISTRIBUTING STATION
Out-door bus structure

At Lindsay distributing station a 24-volt storage-battery and frequency-relay were installed to make provision for automatically reclosing the 44,000-volt circuit to Auburn switching station.

The generating plant beside Ranney Falls generating station, purchased from Quinte and Trent Valley Power Company as reported last year, was placed in service with the 750-kv-a transformer on February 6, 1938. The remote-control feature is not yet completed.

Picton rural station was installed near the town of Picton to supply 8,000-volt power to the rural district in the vicinity. A bank of three 100-kv-a transformers released from Cataraqui distributing station was installed and with the necessary switching and metering equipment was placed in service on March 6, 1938. A 37.5-kv-a transformer, which previously supplied single-phase power for this district, was removed for installation at Snow Road distributing station.

The necessary equipment was installed at Sulphide rural metering station to measure the power supplied to Stoco and Thomasburg.

Changes were made in the metering equipment at Port Hope and Warkworth distributing stations and the Department of Railways and Canals metering station near Campbellford. Equipment was installed to measure the power supply to Non-Skid Pavement Company Limited.

An oil circuit-breaker with automatic reclosing relays was purchased and installed at Auburn switching station in a 44,000-volt circuit to Lindsay distributing station.

Engineering assistance is being given Kingston Public Utilities Commission in the purchase and installation of three 3,000-kv-a, three-phase transformers and switching equipment to replace the original equipment in the station.

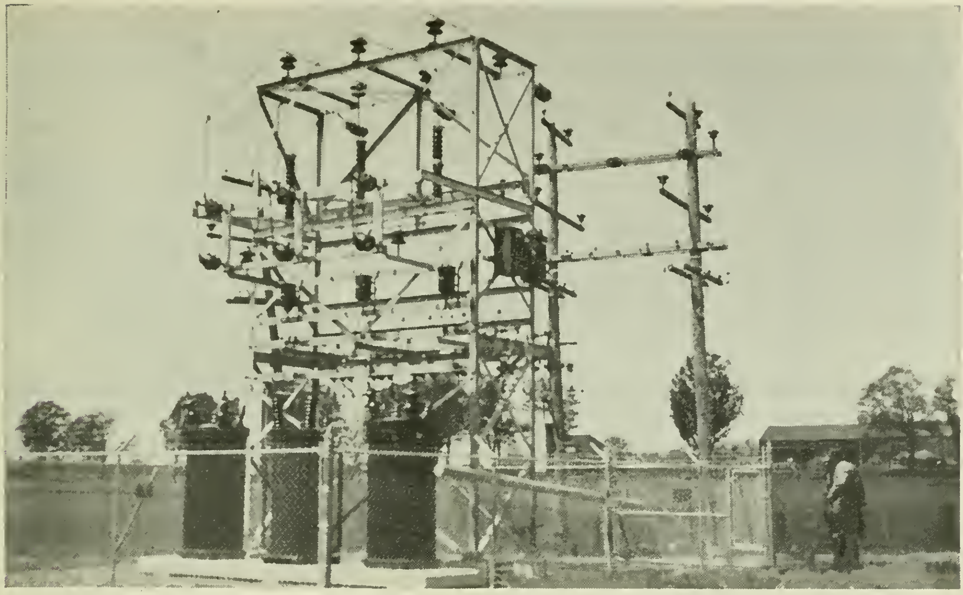
Engineering assistance is being given the Public Utilities Commission at Brockville in the purchase and installation of low-voltage metal-clad switching equipment for the municipal station. The equipment was purchased and installation will be completed next year.

St. Lawrence District—A distributing station was installed at Morrisburg to supply power to the village. A bank of three 100-kv-a transformers was purchased and installed with the necessary switching and metering equipment and the station placed in service on June 26, 1938.

The original Prescott rural station was replaced by a new distributing station. A bank of three 100-kv-a transformers was obtained from system reserve and installed with the necessary equipment; it was placed in service on August 28. The original bank of three 30-kv-a units was transferred to system reserve.

A distributing station was installed at Treadwell to supply power to the village and rural district at 8,000 volts from Gatineau Power Company's 11,000-volt circuit. A bank of three new 100-kv-a transformers was installed and placed in service on October 1, 1938.

Rideau District—The installation of the additional 750-kv-a transformers at Smiths Falls distributing station reported last year was completed and the transformers placed in service on December 15, 1937.



PICTON DISTRIBUTING STATION

Snow Road distributing station was installed in the vicinity of High Falls generating station to supply single-phase power to Perth rural power district and Dalhousie Lake. A 37.5-kv-a transformer recently released from Picton rural station was used for this installation.

Single-phase metering equipment was installed at the south-east limits of Lanark to measure the 2,300-volt power supply to the municipality of Lanark.

At Carleton Place three-phase metering equipment was installed in a 2,300-volt feeder to measure the power supply to Carleton Place rural power district.

Madawaska District—When the two 2,000-kv-a generators at Calabogie generating station were being rebuilt following the damage by fire, the windings of the three 2,000-kv-a transformers were reconnected to give increased capacity to the bank for operation at system voltage. Additional lightning protection was installed and differential protection provided for the generators. A water-pump and storage-tank were installed to improve the water supply to the operators' houses.

At Arnprior distributing station the building was altered and improved switching facilities were installed. The station now supplies power to the distributing system at 4,000 volts instead of 2,300 volts as formerly.

Three-phase metering equipment was installed at the southern boundary of Braeside to measure the 2,300-volt power supply to the municipality.

THUNDER BAY SYSTEM

At Cameron Falls development eighteen new houses, school-house, emergency hospital, community-hall, general store and post-office, and garages are being erected and water-mains and other services extended on the west side of the river where a few of the operators' houses are already situated. The new houses are for the accommodation of the operating staff and their families who have been living in temporary buildings erected during the construction period in 1920 on the east side of the river. The original buildings will be dismantled when vacated. The new houses are of frame construction with insulated walls on concrete foundations. The work should be completed and the buildings occupied before 1939.

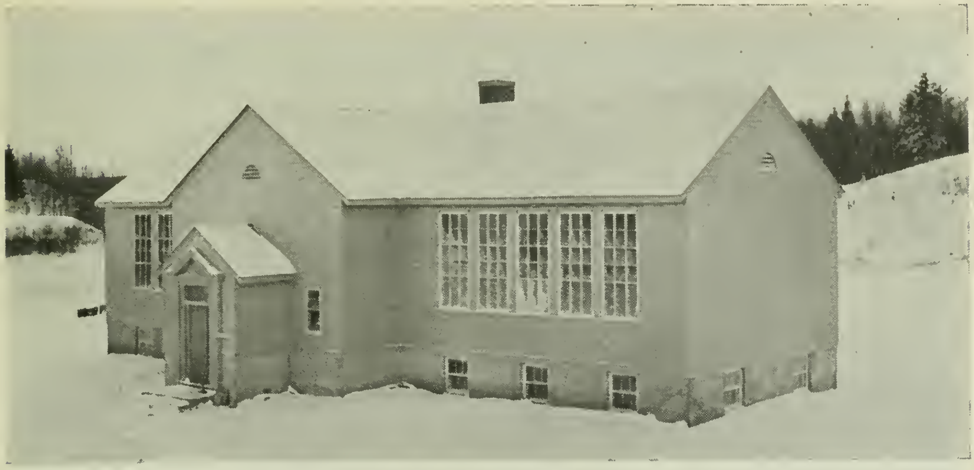
Houses were built at Long Lac transformer station and McKirdy and are under construction at Empire and Jellicoe for the accommodation of the patrolmen engaged in the maintenance of the transmission circuits from Cameron Falls generating station to Long Lac mining area.

The transformer station under construction last year at Long Lac was completed and placed in service on January 23, 1938.

Metering equipments were installed to measure the power supplied to Magnet Consolidated Mines Limited, Tombill Gold Mines Limited and the increased load at Northern Empire Mines Limited. Changes were made in the metering equipment for Sand River Gold Mines.

Engineering assistance is being given the Public Utilities Commission at both Port Arthur and Fort William in the purchase and installation of additional transformers and switching equipment at their respective stations.

CAMERON FALLS DEVELOPMENT—NIPIGON RIVER
Operator's house



CAMERON FALLS DEVELOPMENT—NIPIGON RIVER
Colony Schoolhouse

NORTHERN ONTARIO PROPERTIES

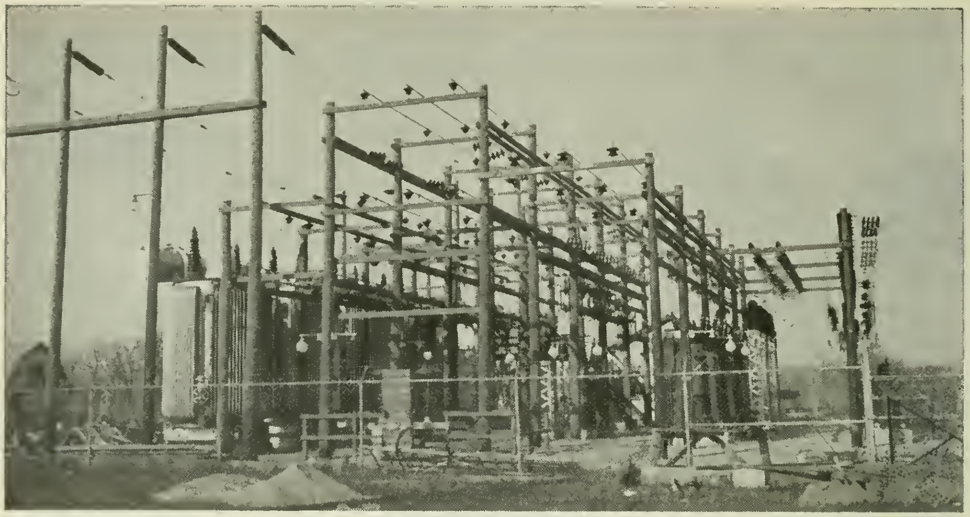
Nipissing District—At Nipissing, Bingham Chute and Elliott Chute generating stations additional metering equipment was installed.

North Bay rural station was installed near the city limits of North Bay to supply the new airport and radio beam station with power. One 37.5-kv-a transformer was purchased and used with two similar units obtained from system reserve to complete a three-phase bank which was placed in service on October 29, 1938.

Sudbury District—At Coniston generating station the necessary equipment was installed for a 22,000-volt circuit to Crystal Falls generating station. Four houses are being erected and an addition is being made to the existing boarding-house, for the accommodation of the operators.

A spare transformer was purchased and installed at Sudbury distributing station.

Abitibi District—The fourth bank of 16,000-kv-a transformers was permanently installed at Abitibi Canyon generating station on March 29, 1938. This bank had been held temporarily at Niagara for emergency service. Fourteen permanent houses and a community hall are being erected at Abitibi Canyon to accommodate members of the operating staff who have previously been occupying the temporary buildings which were erected during the construction period. Water-mains, services and roads are being extended where necessary. The buildings are of frame construction on concrete foundations with insulated walls. The majority of the buildings are now completed and occupied. The old buildings will be dismantled.



FRONTENAC TRANSFORMER STATION

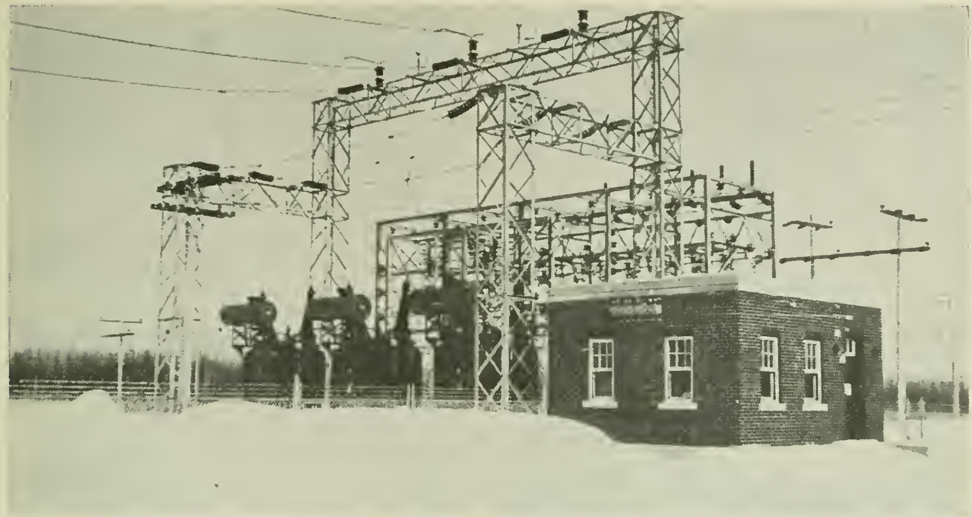
Plans are completed for the erection of houses, garages and storehouses where necessary at Hunta switching station, Mattagami, Matachewan, Westree, LaForest, Wawaitin, Island Falls and Iroquois Falls for the accommodation of the operators and patrol men along the 132,000-volt transmission circuits in the district. Some of the buildings are now being constructed and should be completed and occupied before 1939.

At Kirkland Lake transformer station the original bank of three 9,500-kv-a transformers is loaded beyond normal capacity and an additional bank of similar transformers and a 15,000-kv-a voltage-regulating equipment is being installed. One new transformer was purchased and will be used with two existing units originally secured from Ontario Power Service Corporation to complete the additional bank.

A temporary transformer station was installed on May 19, 1938 at Bourkes in the township of Benoit on Mesabi Gold Mines Limited property to supply power to this company at 26,400 volts. A 1,000-kv-a, three-phase transformer was obtained from system reserve and used for this installation.

Matachewan distributing station was replaced by a new and larger capacity station which was installed on Hollinger Consolidated Gold Mines Limited property. A bank of three 75-kv-a transformers was obtained from Niagara system reserve for this installation and the three original 25-kv-a units were transferred to reserve. The new station was placed in service on May 19, 1938.

Smooth Rock Falls distributing station was installed at Abitibi Smooth Rock Falls (steam) transformer station to supply single-phase power to the village of Mooretown. A 100-kv-a transformer was purchased and the installation completed on April 27, 1938.



LONGLAC TRANSFORMER STATION

Equipment was installed to meter the power supply to Hoyle Gold Mines Limited, Barber-Larder Gold Mines Limited, Hallnor Mines Limited, Chesterville Larder Lake Gold Mining Company, Augite Porcupine Mines Limited, and Lakeside Kirkland Gold Mines Limited.

Additional metering equipment was installed to measure the increased power supply to International Nickel Company at Copper Cliff, Falconbridge Nickel Mines, Moneta Porcupine Mines Limited and Hollinger Consolidated Gold Mines Limited at Matachewan.

Abitibi District, 60-Cycle Division—Metering equipment was installed at the Espanola generating station of the Abitibi Power Company and at Denison Nickel Mines Limited sub-station to meter the purchased power being supplied to the latter company. Similar equipment which was installed for McMillan Gold Mines was dismantled as the power supply was discontinued.

Patricia District—The additional buildings being provided for the accommodation of the operating staff and families at Ear Falls generating station and reported in last year's Annual Report were completed.

Engineering studies were made during the year for the supply of power to prospective mining companies in the Woman Lake area of the Patricia district about 48 miles away and for the supply of power to St. Joseph district from Ear Falls development.

The necessary equipment was installed to measure the power supply to Madsen Red Lake Gold Mines Limited.

St. Joseph District—Additional metering equipment was installed at Rat Rapids No. 2 generating station.

SECTION VI

TRANSMISSION, DISTRIBUTION AND RURAL SYSTEMS

TRANSMISSION SYSTEMS

INCREASED demands and new loads have necessitated many changes and additions to the Commission's transmission systems during 1938.

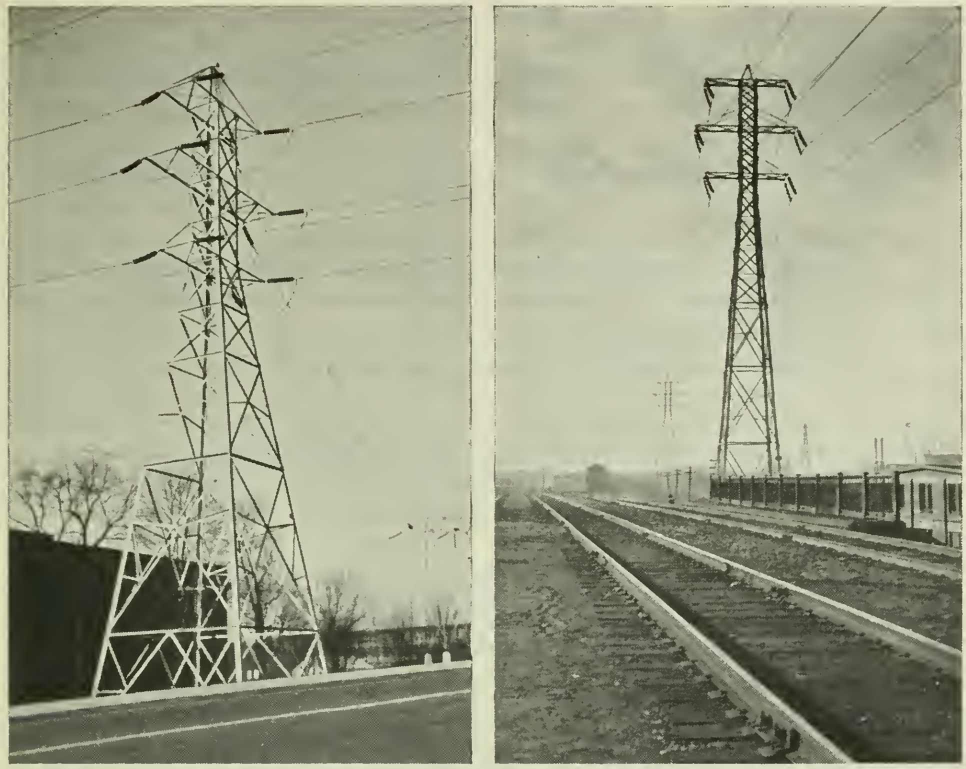
At a cost of approximately $1,104,000, a total of 135.35 miles of transmission line were placed in service, as indicated in the following tabulation; of this total, 47.39 miles were acquired by purchase, chiefly 44,000-volt lines in the Patricia district.

MILEAGE OF TRANSMISSION LINES PLACED IN SERVICE, YEAR ENDED OCTOBER 31, 1938

	Niagara system	Georgian Bay system	Eastern Ontario system	Thunder Bay system	Northern Ontario Properties	Totals
	miles	miles	miles	miles	miles	miles
110,000-volt lines........	7.93	......	......	......	......	7.93
46,000-volt lines.........	2.07	......	......	......	......	2.07
33,000-volt to 44,000-volt lines.......	3.04	10.20	17.94	1.33	47.39	79.90
11,000-volt to 26,400-volt lines.......	33.17	......	......	......	12.28	45.45
Totals............	46.21	10.20	17.94	1.33	59.67	135.35

In addition, revisions and improvements were made in all systems where required.

A map showing the transmission lines and stations of the Commission will be found at the back of this Report and summary tabulations respecting transmission lines in Appendix II.



TRANSMISSION LINES IN TORONTO
The 110,000-volt connecting link between Leaside and Strachan transformer stations (See also Frontispiece)

The following synopsis shows, by systems, the work completed during the year.

NIAGARA SYSTEM

High-Voltage Lines

The construction of a double-circuit 110,000-volt, steel-tower line was completed between Leaside and Strachan Avenue transformer stations, a total distance of 7.02 miles. This line augments the existing circuits which connect the Leaside transformer station with the Niagara system.

The existing single-circuit, 60,000-volt, wood-pole line used as a tie line between Niagara and Toronto Power transformer stations, was replaced by a double-circuit, steel-tower line.

A tower in the 110,000-volt line connecting Kitchener transformer station to Erbs Junction, was relocated to clear a new roadway being constructed by the township of Waterloo.

The wood-pole, 110,000-volt junction structure at Allenburg was removed and revisions to adjacent steel towers were made, so that the circuits are carried through this point to Dundas and St. Thomas transformer stations.

The ground cable was removed from the former Toronto Power 90,000-volt and 60,000-volt lines in the section where the circuits are being used at 13,200 volts, to supply Clarkson and Islington, a total distance of approximately

10 miles. This cable, due to its age, had become rusted and was a hazard to the adjacent power circuits.

Six circuit miles of 190,000 circular-mil copper cable was salvaged from an unused portion of the former Toronto Power 90,000-volt steel-tower line in the Niagara Peninsula.

Rearrangements of the 46,000-volt circuits at Welland transformer station and vicinity, to provide a supply to the Dunnville circuit from this transformer station instead of from Niagara Falls, were completed.

A new junction, N87, was established on the 46,000-volt line at tower No. 305, and a single-circuit wood-pole line was constructed to a new municipal station in Welland, a distance of 1.17 miles.

A 44,000-volt wood-pole line was constructed between a point near Hamilton Beach transformer station and the Dominion Power and Transmission station "C", a distance of approximately 3.25 miles. This work also included 44,000-volt and 110,000-volt line changes to release the present 110,000-volt circuit, to be used as a second line between Hamilton Beach and Stirton Street (Hamilton) transformer stations.

26,400-Volt Lines

Drop-out fuses were installed in the 26,400-volt, single-circuit, wood-pole line on Yonge street at Langstaff and St. Andrew's junctions, and on the pole adjacent to the switch structure at Newmarket distributing station.

Between Mount Joy distributing station and the new Green River distributing station, a single-circuit No. 2 a.c.s-r. line* was completed, a distance of 5.30 miles. The existing air-break switch which was used to control the line to Ringwood distributing station, was relocated and a switch was erected in the new line.

The ¼″ steel ground cable was removed from five double-circuit sections of line, totalling 39.09 miles, between Stratford transformer station and Goderich municipal station.

Sixteen poles were stubbed and six others were replaced with higher ones, to accommodate attachments of Goderich rural power district in the 24-year-old Clinton junction-Goderich line.

Poles were stubbed and others replaced in the Burford junction to Waterford junction, 26,400-volt line, to provide space for rural attachments.

A pole in the Ayr junction to Drumbo distributing station line was replaced to provide space for the erection of a Drumbo rural power district transformer.

A single-circuit, 26,400-volt, wood-pole line was constructed from a new junction on the Waterford junction to Port Dover junction line, to Delhi distributing station, a distance of 12.19 miles.

Poles were stubbed in the Paris junction to Burford junction line in order to provide adequate strength for additional attachments to be erected by Burford rural power district.

On seven sections, totalling 32.18 miles, in Kent district 26,400-volt lines, ground cable was removed. These, together with three other sections totalling 18.93 miles, were rebuilt with pole top pins.

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*a.c.s-r.—Aluminum cable steel-reinforced.

The crossing over the Michigan Central railway, near Ridgetown, was rebuilt, in order to keep it in conformity with the Board of Railway Commissioner's specifications.

Circuits were removed between Wallaceburg junction and Dominion Sugar Company and the poles left standing for the use of Wallaceburg rural power district. This work was undertaken to reduce carrying charges on the inactive line.

Rural services were revised, poles lowered and some others relocated in the 26,400-volt line connecting Puce junction with Essex distributing station, on account of ditching operations by the township of Maidstone.

A steel, lattice-type tower with concrete footing was erected to replace a 50-foot, 2-pole structure at the Canada Salt Company near Windsor.

Other Lines

Between DeCew Falls generating station and a new junction at Welland south, the former 22,000-volt Dominion Power and Transmission lines, built in 1910, were revised. One line having concrete poles, 8.45 miles long, was removed; the other, a wood-pole line, was rebuilt to a single-circuit of 1/0 copper, 6.65 miles, and 115,000 circular-mil copper, 3.20 miles. The line supplying the Beatty-Welland and the Plymouth Cordage companies was connected to this circuit. Between the new junction and the Maple Leaf Milling Company at Port Colborne, 8.35 miles, the former double-circuit line was converted to single-circuit, having pole-top-pin configuration.

The Lucan-Exeter-Dashwood, 13,200-volt line was reinsulated and reconditioned for operation at 26,400 volts. The old ¼″ steel ground cable was removed, and the conductors were rearranged to pole-top-pin configuration. The total distance is 21.85 miles.

Connections were completed to the Ilderton 13,200-volt distributing station situated on the highway north of Arva.

The ¼″ steel ground cable was removed, and a pole-top-pin was erected to carry the middle phase on a group of 13,200-volt line sections between Elora junction and Georgetown distributing station, a total length of 22.20 miles. Some poles were moved to a safer distance from the travelled roadway.

GEORGIAN BAY SYSTEM

High-Voltage Lines

The new 38,000-volt line from Big Chute to Matchedash junction, a distance of 10.20 miles, was completed, and connection was established to existing circuits extending northerly from Big Chute to Bala. The section of line near Bala, 3.84 miles in length, was re-insulated for 38,000-volt operation, and connection, operating at 38,000 volts, was thereby established from Bala to a new development at Ragged Rapids and to Waubaushene.

Eugenia District

Due to the widening of Highway No. 10, it was necessary to relocate approximately three miles of 22,000-volt wood-pole line between Holland Centre and Chatsworth. Guys were relocated in the Eugenia-Dundalk and Elmwood-Tara sections in order to provide additional clearance to adjacent Bell Telephone Company's line.

Wasdell District

Extensive revisions have been carried out on the 22,000-volt lines from Wasdell Falls to Beaverton and Cannington. In the first section south from Wasdell generating station, one 22,000-volt circuit, which formerly was connected to the circuit from Orillia, was removed and the Orillia connection was made direct to the line at this point. The ¼″ steel sky wire was removed through to Beaverton and Cannington, and a metal pole top pin was installed.

From Beaverton junction to Beaverton, 1.59 miles, the conductor of ¼″ steel was replaced with a circuit of 1/0 a.c.s-r., and from Beaverton junction to Cannington, a distance of 9.59 miles, the No. 2 a.c.s-r. conductor was replaced with a circuit of 1/0 a.c.s-r. Sections of line were relocated where road changes made this procedure advisable, and the line was in general extensively overhauled and placed in a more satisfactory operating condition.

EASTERN ONTARIO SYSTEM

Central Ontario District

Between the recently acquired generating station at Sills Island and the Trenton transformer station, a distance of 5.85 miles, a new 44,000-volt transmission line has been constructed, carrying a single circuit of No. 2 a.c.s-r., for a distance of 1.9 miles, and a circuit of 115,000-circular-mil copper for the balance of the distance of 3.95 miles.

A new 44,000-volt, single-circuit line of 4/0 a.c.s-r. conductor, with telephone, was constructed from Auburn switching station at Peterborough to Cavan junction, a distance of 8.02 miles, at which latter point connection is established to the existing circuit to Port Hope. The 44,000-volt line from Auburn switching station to Lindsay, a distance of 28 miles, was overhauled, additional guys were provided, and the conductor was resagged.

From Picton junction to Picton, a distance of 28.25 miles, the 9/32 inch steel conductor was replaced with a circuit of No. 2 a.c.s-r., thereby materially improving the voltage condition to Picton and intermediate stations.

From Frontenac transformer station at Kingston, a new 44,000-volt circuit, 2.07 miles long, was contructed to intersect the existing line at York Road, near Cataraqui. The 44,000-volt lines in the city of Kingston were sold to that municipality.

St. Lawrence District

The 44,000-volt line on congested streets in the town of Prescott was moved to a point north of the town. This involved the removal of 1.03 miles of line, and the construction of 1.68 miles of new line.

At Morrisburg, connections were made to a new station in the municipality, involving the construction of 0.32 of a mile of single-circuit, 44,000-volt line along the canal, together with the installation of an air break switch at the junction.

At Cardinal distributing station, sectionalizing air break switches have been installed to improve service.

Madawaska District

An additional air-break switch has been installed on the 33,000-volt lines at Burnstown junction for sectionalizing purposes.

THUNDER BAY SYSTEM

A 44,000-volt air break switch was erected at Beardmore distributing station on Cameron Falls side.

Two 44,000-volt air break switches were erected at Nezah junction and two at Bankfield junction.

Some additional clearing was done on the Sturgeon River Gold Mines transmission line.

Between Bankfield Consolidated Mines Limited and Magnet Consolidated Mines, a distance of 1.33 miles, a single circuit 26,400-volt, wood-pole line was completed.

Privately owned transmission lines approximately 8 miles long were incorporated in the Thunder Bay transmission system.

NORTHERN ONTARIO PROPERTIES

Abitibi District—132,000-Volt Lines

Expulsion gaps and grounding system were installed in a portion of the 132,000-volt, double-circuit, steel-tower line between Timmins and Copper Cliff transformer station.

On the above line, two interswitching stations were constructed, one at Mettagami and one at La Forest, each station composed of five gang-operated switches mounted on steel structures.

Other Lines

A single-circuit, 26,400-volt, wood-pole line 850 feet long, was constructed to the Augite Porcupine Mines Limited station.

A similar line to the above, 580 feet long, was constructed to the Barber-Larder Gold Mines Limited station.

From a point on the existing line to the Kerr-Addison Mines, a single-circuit, 26,400-volt wood-pole line was constructed to the Chesterville Larder Lake Gold Mining Company Limited, a distance of 1.14 miles.

At Pamour transformer station a short tap line, 1.22 miles long, was constructed to the existing Hallnor transmission circuit, and in the same district, 1.37 miles of single-circuit, 26,400-volt line was constructed to the Hoyle Gold Mines Limited.

Sudbury District

Defective insulators on the 33,000-volt line between Espanola and High Falls were replaced, in order to provide better operating service to the Denison Nickel Company Limited.

Privately owned lines to the extent of 6.8 miles, were incorporated into the transmission lines of the Sudbury district.

Patricia District

The privately owned 44,000-volt transmission line, 40.56 miles, previously owned by the Howey Gold Mines Company, was purchased and incorporated into the transmission system of the district, after considerable rehabilitation work was done on the structures.

Nipissing District

Reconditioning work was completed on the existing transmission lines between Crystal Falls junction, and Sturgeon Falls junction, recently purchased from the Abitibi Power and Paper Company.

A telephone circuit, 24 miles in length, was erected on existing 22,000-volt pole line between Sturgeon Falls and North Bay, in order to facilitate the operation of the Sudbury and Nipissing systems.

TELEPHONE LINES—ALL SYSTEMS

In the Niagara system 9.1 miles of 2-circuit telephone pole line near Ancaster and Preston, and 1.1 miles of 4-circuit line in the vicinity of Nelson were rebuilt. Further pole lines rerouted included a 2.7 mile section between Saltfleet junction and Hamilton transformer station, 3.3 miles of double-circuit pole line near Preston, and 1.5 miles of similar line near Beachville. A single circuit was extended on existing rural poles from Fruitland distributing station to Stoney Creek 1.6 miles, and from Welland transformer station to Port Colborne 5.7 miles.

Conductor was replaced on a 2-circuit line for 4.7 miles near Ingersoll, and 4.2 miles of a single-circuit line between Kitchener and Stratford was renewed.

In the Georgian Bay system 26.2 miles of existing circuits were restrung and augmented by a second circuit, and 11.1 miles of circuit were replaced between Bradford and Fergusonvale. Between Eugenia generating station and Meaford junction a second circuit was erected for a distance of 8.4 miles.

In the Eastern Ontario system a 10-pair lead covered cable was erected and 8 circuits of open wire were retransposed between the switching station and the office at Belleville, a distance of 1.5 miles.

DISTRIBUTION LINES AND SYSTEMS

Rural Power Districts

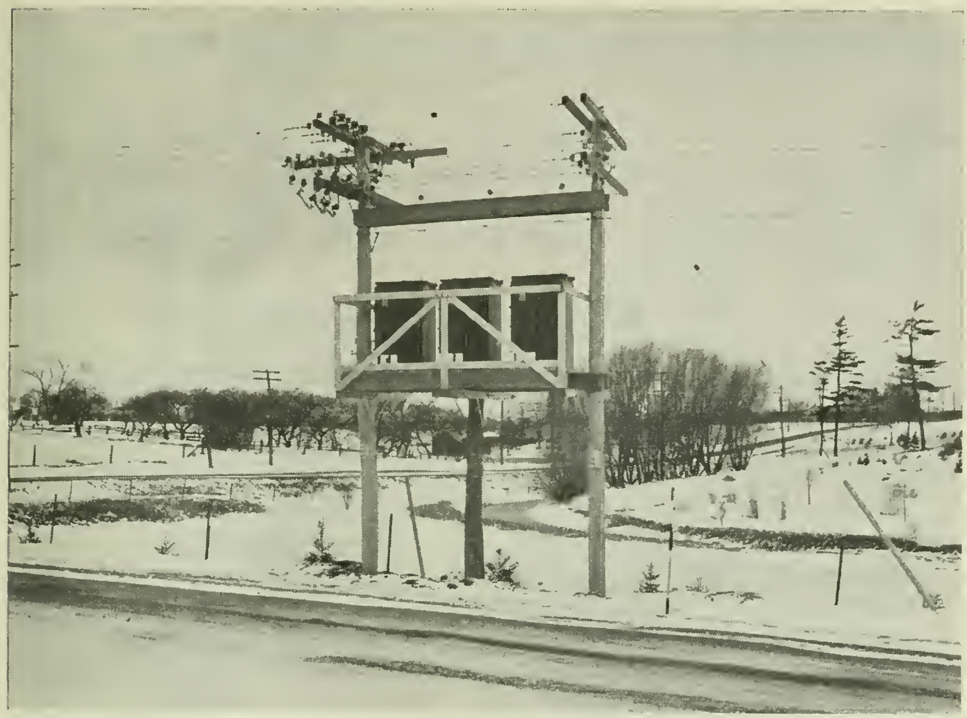
Greater progress was made during the year, in the extension of lines in rural power districts, than in any previous year.

Appendix III shows, in tabular form, the growth in each of the 181 districts.

During the year 2,390 miles of new primary lines were constructed and service was given to 13,335 additional consumers.

The record shows that, to date, 15,036 miles have been constructed and 97,409 consumers are now receiving service.

In addition to the construction of new lines, improvements were made in many districts to provide better service. Such improvements consisted of the installation of voltage regulators, the replacement of smaller conductors by conductors of larger carrying capacity, the changing of primary voltages from 4,000 to 8,000 volts, etc.



AUTOMATIC VOLTAGE REGULATORS—BOND LAKE R.P.D.
Yonge St. at Langstaff—50 amperes—2,300 volts

NIAGARA SYSTEM

Aylmer R.P.D.—The primary lines in the northern part of the district were changed from 4,000/2,300 to 8,000/4,600 volts. The whole district is operated now at 8,000 volts, the southern part having been changed several years ago.

Caledonia R.P.D.—The primary lines in the southern section of the district were changed from 4,000/2,300 to 8,000/4,600 volts.

Dorchester R.P.D.—The No. 4 copper conductors of the primary line from Dorchester to Belmont were changed to No. 1/0 copper.

Harrow R.P.D.—The No. 4 and No. 6 primary conductors between Harrow and Colchester, were removed and replaced with three conductors of No. 3/0 aluminum, steel-reinforced, with neutral of No. 2 of the same material.

East and west from Colchester, conductors were changed from No. 6 copper to No. 2/0 aluminum, steel-reinforced, with No. 2 neutral of the same material.

Ingersoll R.P.D.—The primary lines in this district were changed from 4,000/2,300 to 8,000/4,600 volts.

Oil Springs R.P.D.—The single-phase line from Oil Springs to Inwood was converted to three-phase by the addition of two conductors of No. 4 copper.

St. Thomas R.P.D.—The primary conductors to serve the Provincial Hospital were increased in size from No. 6 copper to No. 1/0 copper.

Wallaceburg R.P.D.—From Wallaceburg to the hamlet of Electric four primary conductors of No. 6 copper were removed and replaced by three conductors of No. 2 aluminum, steel-reinforced and a No. 4 copper neutral.

Walsingham R.P.D.—The primary lines in northern part of this district were rearranged to feed from the new 8,000/4,600-volt substation at Delhi.

Woodbridge R.P.D.—Malton Airport was given service from a new substation.

GEORGIAN BAY SYSTEM

Bala R.P.D.—Primary voltage was changed from 6,600 to 12,000/6,900 to provide improved service.

Gravenhurst R.P.D.—For the Department of Transport the Reay Emergency Landing Field was given service.

Hawkestone R.P.D.—Primary lines in this district were changed from 4,000/2,300 to 8,000/4,600 volts.

Mariposa R.P.D.—Primary lines in this district were changed from 4,000/2,300 to 8,000/4,600 volts.

Meaford R.P.D.—Fourteen miles of three-phase, 8,000/4,600-volt line was constructed between Meaford and Clarkesburg with thirty miles of single-phase extensions therefrom.

Minden R.P.D.—A distributing system was constructed in the village of Kinmount.

Sparrow Lake R.P.D.—Primary voltage in this district was raised from 4,000/2,300 to 8,000/4,600.

EASTERN ONTARIO SYSTEM

Kingston R.P.D.—A submarine cable one and one-half miles in length was laid to give service on Wolfe island.

Lakefield R.P.D.—Primary voltage was changed from 6,600 to 12,000/6,900.

Madoc R.P.D.—Service was given for the first time in this district, seventeen miles of primary line being completed.

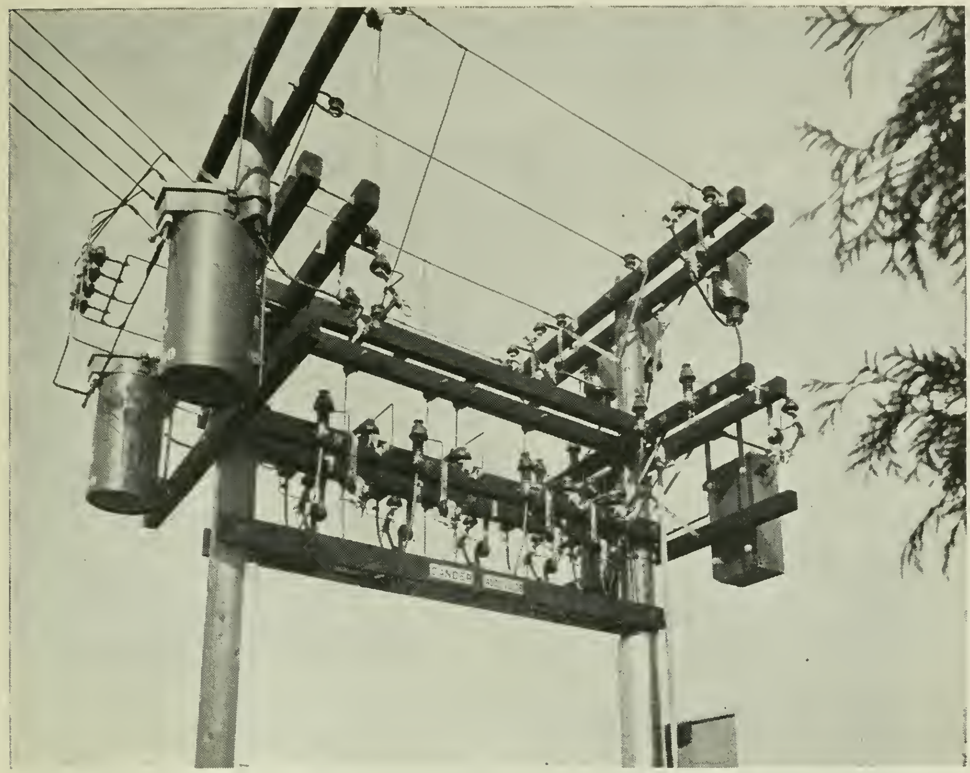
Maxville R.P.D.—Service was improved by the installation of a substation at Treadwell; power is supplied to this station through a submarine cable across the Ottawa river.

Napanee R.P.D.—Amherst island was given service by the laying of a submarine cable 1.45 miles in length.

Nepean R.P.D.—Overhead lines adjacent to the Rockcliffe Airport were dismantled and replaced by underground cables.

THUNDER BAY SYSTEM

Port Arthur R.P.D.—A ten mile extension of 6,900-volt line was made to serve summer cottages at Loon Lake.



MALTON AIR PORT—METERING AND SWITCHING STRUCTURE

Main switching and metering structure controlling 12 underground cables supplying the air port for Trans-Canada Airways. All cables can be inter-switched. Service transformers for 3-phase supply at 230 volts to the Administration building are also shown

MANITOULIN RURAL POWER DISTRICT

Manitoulin R.P.D.—Thirty-three miles of three-phase 12,000/6,900-volt line and eight miles of single-phase, 6,900-volt line were constructed to serve Manitowaning and South Baymouth.

NORTHERN ONTARIO PROPERTIES

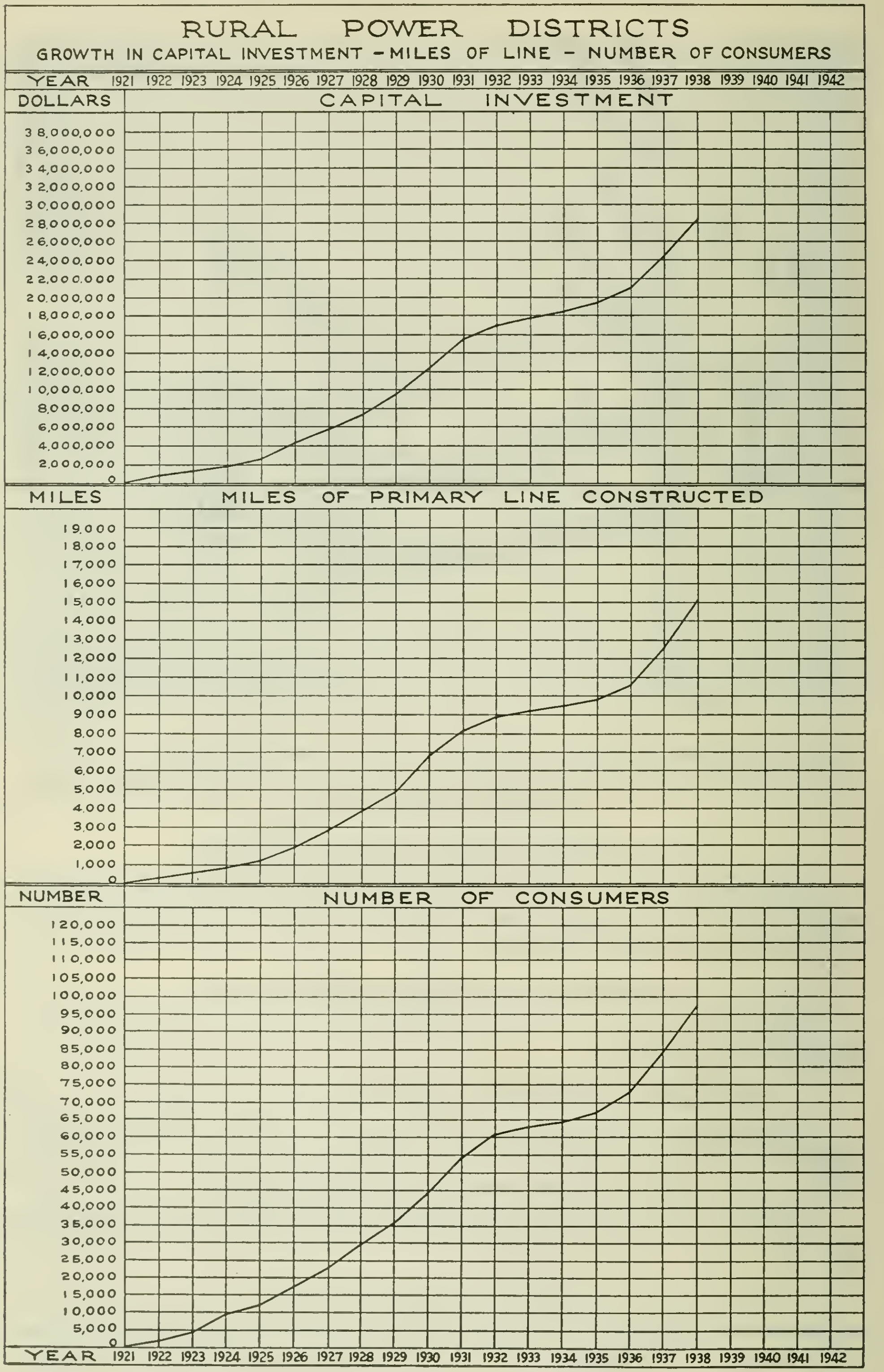
North Bay R.P.D.—6.6 miles of 8,000/4,600-volt line was built to serve the North Bay Airport.

HIGHWAY LIGHTING AND TRAFFIC SIGNALS

At the request of the Department of Highways of Ontario the Commission undertook to install a system of modern lighting on the four-lane highway which is under construction between Toronto and Burlington.

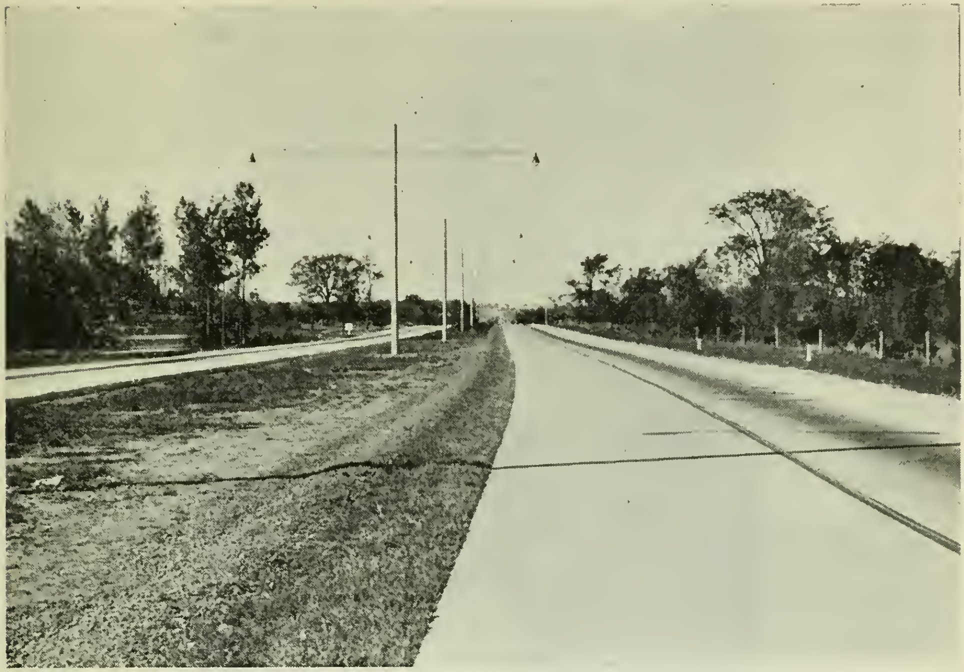
Lights are now in operation on a section, thirteen miles in length, extending from the intersection with Highway No. 27 (Brown's Line) to the town of Oakville.

In general there is a center boulevard, 30 feet in width, separating the pavements and the poles which support the luminaires are erected in the center of the boulevard. On tangents the poles are 200 feet apart, this spacing being

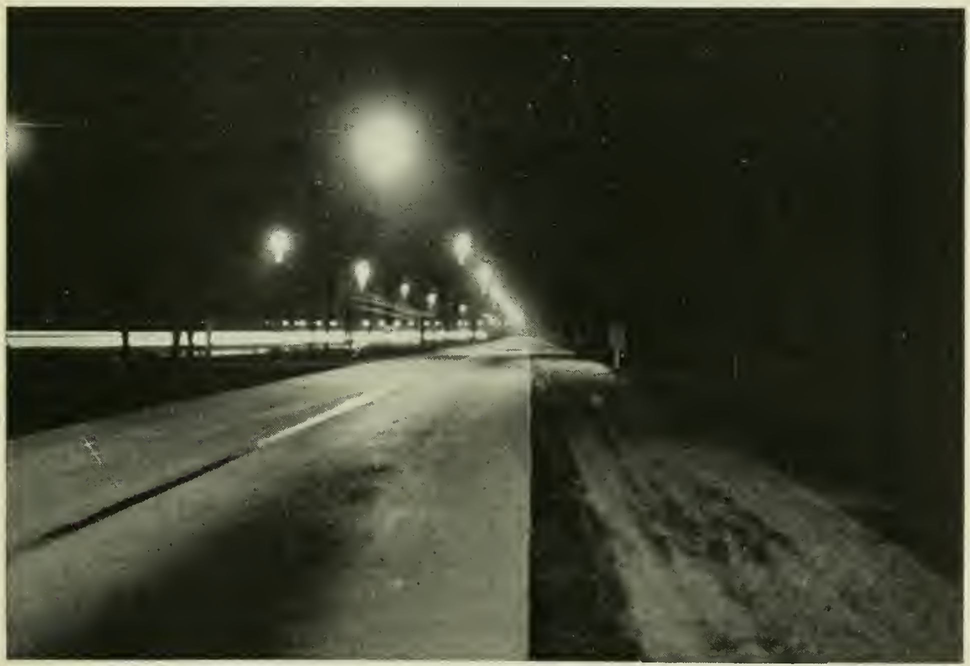


RURAL POWER DISTRICTS

GROWTH IN CAPITAL INVESTMENT – MILES OF LINE – NUMBER OF CONSUMERS



LIGHTING OF DUAL HIGHWAY, TORONTO TO BURLINGTON
Supports are placed in centre boulevard, wires are underground



LIGHTING OF DUAL HIGHWAY, TORONTO TO BURLINGTON
Night view

LIGHTING OF DUAL HIGHWAY, TORONTO TO BURLINGTON
Truck with extension ladder for installation and maintenance

reduced to 150 feet at curves. The poles are 35 feet in length, of Western cedar, stained green and treated at the ground line to retard decay.

The brackets supporting the luminaires are of welded tubular steel, galvanized, 18 feet in length. Two are mounted on each pole, 180 degrees apart and extend 3 feet over the edge of the pavement. The light center is 25 feet above the surface of the pavement.

As there are already some mature trees on the boulevard, and others will be planted, the wires to serve the lighting units have been placed underground, two feet below the surface of the boulevard. The circuit is energized at 230/115 volts.

The standard luminaire is fitted with a glass refractor and houses a 300-watt incandescent lamp.

For comparison in illumination value, a length of one mile of sodium vapour units was installed.

Special attention was given to the lighting of the clover-leaves at Port Credit and Burlington, and the several bridges along the highway.

All lighting circuits are controlled by photo-electric units.

Other work carried on for the Highways Department included the supervision of the lighting of the Canadian section of the Sarnia-Port Huron international bridge and installation of traffic signals at several places on the King's Highways.

SECTION VII

TESTING—RESEARCH—INSPECTION

PRODUCTION AND SERVICE

THE Laboratories have continued their service to other departments, and to municipalities, in testing, inspecting and checking materials and equipment to insure that suitable characteristics and reasonable life in service are being obtained. Various materials entering into construction, such as gravel, cement, metals, wood, paint and insulation, are examined, and typical specimens are tested. Fabricated work and assembled equipment are inspected at the factories; on both electrical and mechanical equipment tests are witnessed and measurements made. Reports are then prepared as the basis for acceptance or rejection of the equipment and to record the results for future reference. This work includes generators, turbines, transformers, oil circuit breakers and other switch gear, together with lighting and metering equipment.

Research work is carried on at all times to improve quality and characteristics in equipment, to determine causes of failures, and to reduce cost of operation. New applications of electricity which appear to be worth while are investigated with a view to increasing the sale of electrical power or rendering its use more convenient for present consumers.

The Research Committee, organized in 1933, now has fourteen active subcommittees which work in conjunction with the Laboratories on various important problems of the Commission, giving opportunity for exchange of ideas and development of suggestions from individual members of the staff regarding new equipment and processes.

The Approvals Laboratory handles a very large volume of work each year in examining and testing appliances of various types, and also wire and wiring materials, to make certain that these are substantially made and that adequate protection against fire and electrical shock is provided. There have been remarkably few serious electrical accidents in the Province, a situation which, to some extent, is due to the activities of this department.

Electrical installations in residences, factories and other buildings, are inspected and checked according to standard rules to reduce as much as possible the chance of accident and the fire hazard. A high class of workmanship and the use of approved material and devices are the chief requirements, and inspection insures that such features have been given the necessary attention.

TESTING AND RESEARCH LABORATORIES

Routine and General Testing

The Laboratories have done a large amount of inspection and routine testing on various devices, equipment and materials for use by other departments of the Commission, or for municipalities. This work is very diversified in nature, requiring much testing equipment and a broad knowledge, on the part of testing engineers and inspectors, of the characteristics desired in the finished equipment and installation.

Materials and Equipment Inspection

There was a very large increase in the factory testing of transformers, and in mechanical equipment inspected. The checking of welding has been given particular attention and has resulted in improved workmanship.

The testing of paint has increased in volume, and the desire for better lighting has resulted in much greater service being rendered by the Laboratories in the preparation of lighting plans with recommendations for different applications.

Tests of a wide variety have been made to insure satisfactory characteristics in equipment purchased.

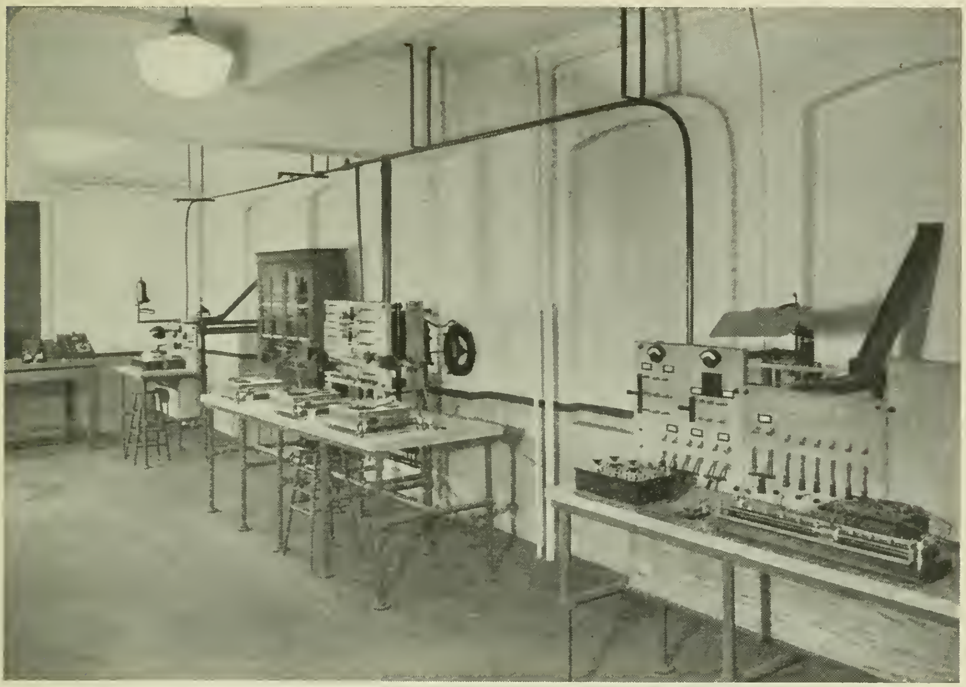
Transmission Line Materials

Inspection of all transmission line materials handled by the Strachan Avenue stores was carried out as usual. This covered crossarms, insulator pins, general line hardware, wire and cable. The copper wire, steel-reinforced aluminum and galvanized steel cable inspected amounted to 2,200 tons.

Electrical Equipment

Factory inspection included two 4,500-kv-a generators, and 135 power transformers of various sizes, with total capacity of 296,860 kv-a. There were also inspected, 7,780 distribution transformers, 29 oil circuit breakers with total of 2,979,000 kv-a, 8,700 disconnecting switches of different types, totalling 7,986,500 kv-a, and about 290,000 line and bus insulators. Switchboards and metal-clad switch gear were inspected for two municipalities and for three of the Commission's stations. The generators, with some transformer and switching equipment, were inspected for the new Ragged Rapids generating station. The power transformers inspected include six new units, each of 25,000 kv-a rating, for Leaside transformer station.

Routine tests were made in the Laboratories on 5,080 pairs of linemen's rubber gloves, 2,800 samples of insulating oil, 8,500 thermostats with 18,000 fuse links, and 509 insulators of various types. Also 3,315 watthour meters were repaired and checked, 183 indicating instruments were calibrated, and 172 instrument and distribution transformers were tested.



THE STANDARDS ROOM
In which electrical instruments are calibrated, and measurements of very high accuracy are made

Mechanical Equipment

Two 5,200-h.p. turbines were inspected at the manufacturer's plant; these were installed at the Ragged Rapids generating station. There were four 15-ton headgate hoists, two 48-inch butterfly valves, a 25-ton crane and one 10-ton speed winch.

Miscellaneous items included headgates, folding doors, louvres, sluice gates and mechanisms, hand railings, valves and ventilator framework. A large number of welded tanks for various purposes were inspected, and also the assembly of a gasoline engine generator set, 20 kw, for excitation purposes in the field.

Concrete

Resident inspectors were maintained on six construction projects. Their duties consisted of testing the aggregates used and supervising the various manufacturing processes. Samples of the field concrete were obtained and tested, as a check on its quality, and laboratories were established for this purpose on five of the jobs.

Field inspections were made of sixteen structures in service. These inspections serve a triple purpose for they record for future reference the condition of the concrete, they disclose the need for repair work where such is necessary, and they provide data on the probable life of concrete under different exposures.

Paint

About 150 samples of paint were tested to insure that uniform quality was being maintained. Several new paints were added to the approved list for various applications.

Steel and Timber

The inspection of steel covered a total of 1,711 tons for various purposes. Reinforcing steel and galvanized sheet steel showed a large increase over last year. In addition, 318 stop log timbers were inspected.

Lamps and Lighting Service

There were 65,600 lamps checked at the factory and 3,170 tested at the Laboratories. Also a number of special lamps were checked to determine their characteristics.

More lighting plans were prepared than in previous years, a total of 325, and recommendations were given as to their application for different types of building.

Three headlight devices for automobiles were examined, and tests made on a new directional signal. A report was prepared on one type of fog signal.

Different kinds of safety glass have been tested, a total of 210 samples; these tests are now standardized, so that valuable comparative information is obtained.

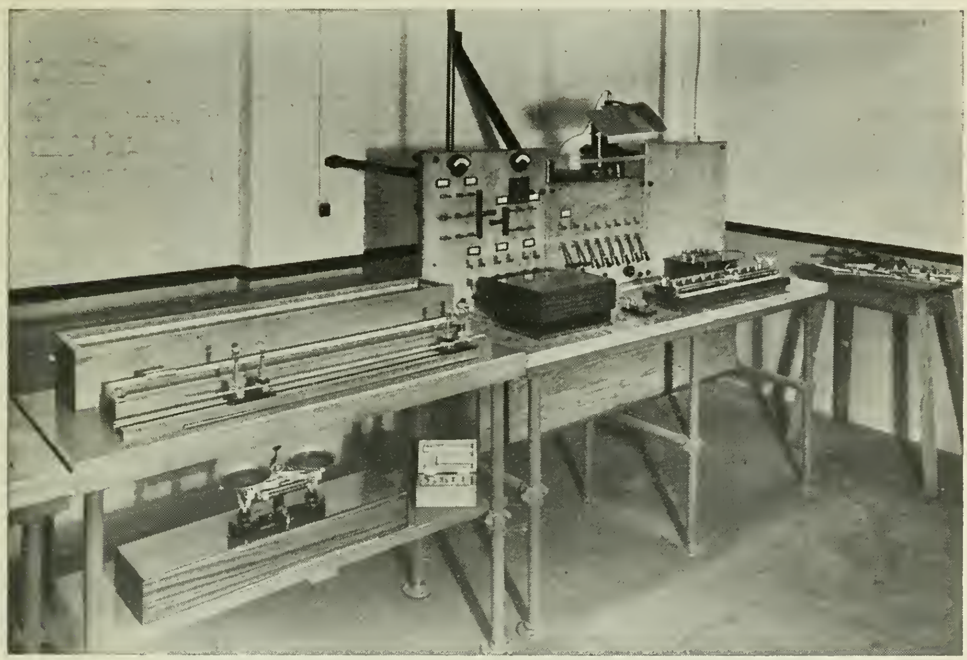
Research

The research work consists chiefly in studies and investigations in both the Laboratory and the field, to determine quality of materials for the Commission's use, and to develop and improve equipment and methods of using electrical power as a means toward its wider application.

Vibration

The studies relating to vibration in power line conductors were carried further and have resulted in changes in the design and arrangement of torsional dampers to give noticeable improvement in damping efficiency. Some work was done correlating damper performance with wind velocity and valuable information was obtained. Additional data on armor rod dampers has resulted from recent tests.

Investigations on the fatigue-resisting properties of galvanized steel ground wire were continued and microscopic examinations of a number of fractures were made. The tests have indicated that higher fatigue limits in the wire accompany higher tensile strength though the ductility is lower. Also, certain methods of galvanizing were found to reduce the endurance strength limit.



KELVIN BRIDGE AND AUXILIARY EQUIPMENT
In Standards Room, used for accurate determination of the electrical conductivity of wire and cable

Rural Applications of Electricity

Installations for the use of electricity in agriculture and floriculture have received considerable attention, chiefly in the matter of soil heating combined with light. The studies produced valuable information on the deleterious effects of the excessive use of these agents. In this work the Laboratories have co-operated with the Ontario Agricultural College at Guelph.

Different types of filters to eliminate infra-red rays have been tested.

The characteristics of a new type of grain grinder and the use of storage steam generators for pasteurizing milk have been investigated.

Electrical Insulation

Studies were directed toward the improvement of insulation of all types by checking materials and modifying designs of insulators, bushings and other forms. A large number of transformer and oil switch bushings were tested, while in service, for partial breakdown. Several defective units were discovered and were reconditioned. This procedure has prevented many ultimate failures in bushings and avoided consequent power interruptions.

Application of Electronics

Important problems in which electronic methods of control may be applied in the operation of the various power systems have been studied through the year. These related chiefly to the use of carrier currents in improving the sensitivity of relay protection systems. Investigations have been started to determine the merits of different methods applicable to existing relay circuits.

Electric Welding

The study of good technique in welding, and of reliable methods of checking finished welds, was continued. Work has proceeded on welding rods and properties of weld metals, particularly in regard to impact characteristics. An investigation of welding by three-phase alternating current has been started.

Masonry Materials

A large amount of work was done on the prevention of deterioration in concrete, and methods are being tried for repairing eroded and otherwise damaged surfaces. Concrete admixtures and the use of slags in concrete aggregates also have been studied.

To fill the need for definite instructions on small concrete jobs, specifications were prepared to cover this class of work. These were completed but have not yet been submitted in final form.

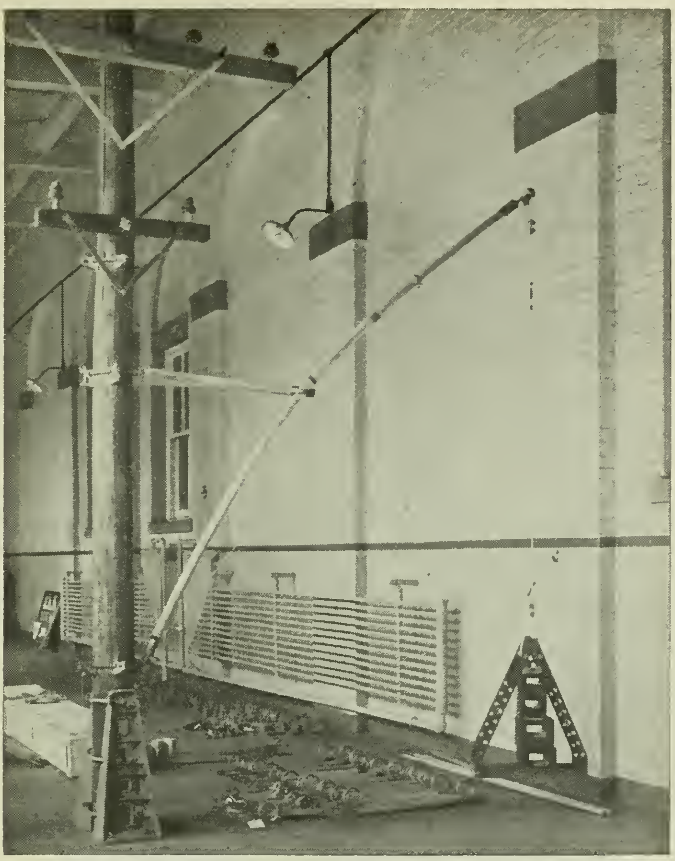
Studies of the effects of movements of water through porous concrete were commenced in order to correlate physical changes in the material with loss in chemical constituents. It is thought that this relation may provide a means of determining the condition of concrete structures so that early remedies may be applied to avoid the necessity for extensive repairs later when deterioration has become more serious. This investigation is being made on cylindrical specimens, placed in water and having air circulation around their upper ends, thus providing vertical movement of the water through the specimen, and evaporation, with consequent surface deposition of soluble constituents from the cement.

Treatment of Wood Poles

Important problems relating to the deterioration and preservation of wood poles have been studied. Field inspections were made on a number of the early groups of sand-creosote collars installed for the purpose of protecting existing poles at the ground line and as a result, refinements in their use have been introduced. An investigation has been carried out in the Laboratory to learn more regarding the movements of water in the butts of poles and to determine whether or not these movements could be used to advantage as a means to introduce water-soluble preservatives into the poles.

A new split-pole reinforcing collar has been considered for old poles and was found to have evident merit in the matter of cost, strength, efficiency, and appearance, especially in comparison with the unsightly stubs now in use.

Specimen poles in test beds at Barrie and Leaside have been under observation for several years to determine the rate of decay. The annual inspection of these poles was made, and also about one hundred and sixty poles on the power lines were examined to check deterioration.



MECHANICAL STRENGTH TESTING

Testing the mechanical strength of new tools used to support energized lines while insulators, pins or cross arms are being changed

Paints

Several paints for special exposure were given accelerated weathering tests. Four houses were painted in order to collect actual field data. A series of tests was made to determine the effect of moisture penetrating the walls of frame buildings where inside humidity was high and the exterior temperature very low.

Petroleum Products

Studies regarding the reconditioning of insulating oils have been continued with very promising results as to a suitable field method being developed. Lubricating and fuel oils have been tested for characteristics to enable selection to be made. Several greases also were tested to determine their film strength, and consistency at various temperatures.

The use of flexible expansion chambers as breathers for certain types of transformers has been studied and some of their characteristics determined.

Water Treatments

Prevention of corrosion in domestic water tanks and cooling systems was investigated and a study made of the effect of operating temperatures and pressures as agents in accelerating deterioration.

Miscellaneous Research

Possible methods and available equipment for controlling loads from remote points have been studied, particularly for water heaters and range loads.

Efficiency tests were made on different types of hot plates. The conductivity of the cement in some units was measured. Range loads have been studied regarding the maximum demand in residences.

Studies of methods of grounding rural distribution circuits were started with a view to improving protection where ground resistances are unusually high.

Recent advances in soil mechanics have been followed with special interest in devices and test procedures for measuring the permeability and consolidation of clays as used in earth dam construction.

The characteristics of different types of insulators were investigated with regard to creation of radio interference, and a number of typical specimens were tested to determine their critical interference voltages.

The difficulties encountered in aluminum cable joints have received attention and studies were commenced toward improvements in methods of making joints.

Investigations of the operation of two new types of cutout have been made, including oscillograph tests to determine the time elapsed in clearing the circuits.

A new type of live line tool has been developed and various strength tests were made.

Investigations of Troubles

A fatal accident in connection with an electrical threshing outfit was investigated and a defect found in the equipment. The results of the inspection and tests of the circuits were presented at the coroner's inquest.

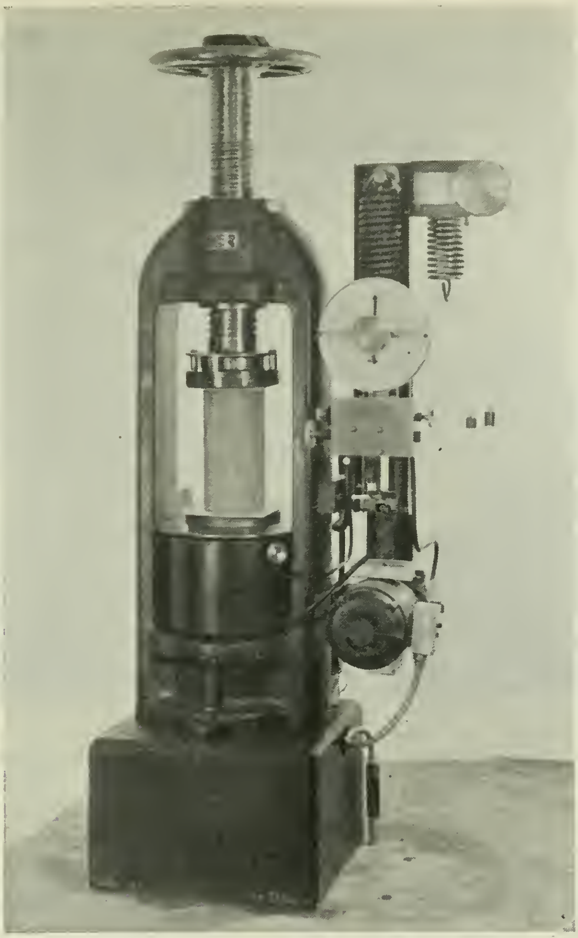
Tests following a complaint in regard to a certain paint showed it to have a false body due to excess of water and to be generally unsuitable for the purpose intended.

Conditions in electrical circuits at a steel plant were investigated to determine the cause of failure of a number of transformers during operation of an electric furnace.

Miscellaneous

New Equipment

The problems studied by the Laboratory staff require the use of various types of equipment for making necessary tests. New devices are added when



COMPRESSION TESTING MACHINE—HYDRAULIC
For compression testing of concrete, stone, wood and other materials.
Capacity 400,000 lbs.

important investigations lead into new fields, or beyond the capacity of present testing apparatus.

Equipment, known as the "Air-Oxygen Bomb," was installed for the accelerated aging of rubber insulation on wires and cables. Specimens are exposed to air, or oxygen, under pressure and at elevated temperatures for given periods and then submitted to the usual tests for quality. The control and temperature recording apparatus are placed outside the bomb room for convenience and safety.

A hydraulic compression testing machine, of greater capacity than existing equipment, has been installed for testing concrete, stone, wood and other materials, up to a maximum applied pressure of 400,000 lbs. Throughout its entire loading range the machine has a very high accuracy.

WIRE TESTING LABORATORY
Where types of insulation on wires and flexible cords are inspected and tested

To the equipment of the Standards Room, several portable instruments have been added. These include a number of indicating voltmeters and ammeters of the usual types, and also, (a) an electrostatic voltmeter which allows voltage to be read without disturbing circuit conditions, (b) a vacuum-tube voltmeter for measuring high frequency voltages in testing electro-medical apparatus and radio devices, and (c) a six-point temperature recorder which permits continuous records of temperature to be made on a wide variety of apparatus under thermal or other tests. Special equipment, built at the Laboratories, facilitates accurate conductivity tests on wires and cables.

A new portable oscillograph has been ordered and will be a useful instrument in laboratory and field investigations. It is provided with six elements, and connections such that these may be used for potential or current in any arrangement desired. With the long film holder attachment, a record up to fifteen feet in length will be obtained.

A special device for the testing of lubricating oils to the point of breakdown of film strength has been provided. It functions by means of a shaft running in a bearing. Pressures are increased automatically and temperatures and torque are measured as the tests proceed. This provides a very sensitive means of comparing oils.

Specifications and Committee Work

A new specification for bolts was prepared, and revisions were made in the existing specification for installation of the sand creosote collar for preservation of wood poles.

Members of the staff assisted on various engineering committees and attended meetings and conventions of the Canadian Engineering Standards Association, National Research Council, American Association for the Advancement of Science, American Society for Testing Materials, American Concrete Institute, Association of Municipal Electrical Utilities, Engineering Institute of Canada, Canadian Electrical Association and the American Institute of Electrical Engineers.

APPROVALS LABORATORY

Statistical

Comparative figures for tests and inspection carried out by the Approvals Laboratory during the past three years are as follows:

	1936 number	1937 number	1938 number
Applications received			
Approval	770	793	817
Special inspections, etc.	320	395	634
Listing only	61	44	64
Factory Inspection Reports			
Wire and Conduit	850	573	1,164
All other	4,862	4,831	5,193
Labels sold			
Cord, Wire, Cable, etc.	594,000	765,800	660,100
Conduit	900,000	1,101,150	1,000,600
All other	1,865,500	2,468,860	2,334,412
Labels sold—Total	3,359,500	4,335,810	3,995,112

There has been a natural increase in applications received except that special inspections have doubled in number over those received two years ago. This evidently was a result of the activities of the Sales Enforcement office now attached to the Electrical Inspection department at Toronto.

The increase in factory inspection reports for wire and conduit was due to the fact that the staff assigned to this work was augmented and also there was a larger number of samples obtained from the factories for test.

It will be noted that "Labels sold" has dropped about 10 per cent in all types.

Inspection and Testing of Wire, Cable and Conduit

There were 582 factory inspections of wiring materials, and 1,164 inspection reports were forwarded to manufacturers. The amount of wire, cable and conduit labelled are given in the following table:—

	1936 M-ft.	1937 M-ft.	1938 M-ft.
Insulated wires (including R.C. fixture wire)	109,230,000	146,750,000	105,875,000
Heat-resisting fixture wire	....	3,350,000	4,275,000
Christmas tree wire	....	1,100,000	5,500,000
Insulated flexible cord	30,125,000	33,250,000	28,250,000
Heater cord	5,375,000	5,625,000	4,750,000
Tinsel cord	....	1,100,000	500,000
Armoured cable	11,560,000	13,300,000	12,900,000
Flexible steel conduit	250,000	300,000	350,000
Flexible non-metallic tubing	5,000,000	6,250,000	4,250,000
Non-metallic sheathed cable	12,350,000	18,450,000	24,500,000
Rigid steel conduit (including elbows and nipples)	8,500,000	11,000,000	9,900,000

It will be noted that heat-resisting fixture wire, Christmas tree wire and tinsel cord are shown only for two years. Prior to 1937, tinsel cord was labelled with heater cord labels and the other two items with insulated wire labels. The first two of these items show a greater footage inspected than in 1937.

The amounts of flexible steel conduit and non-metallic sheathed cable inspected also are larger than last year, and the increasing popularity of the latter material as a wiring system is strikingly shown.

Applications for Approval

	1936 number	1937 number	1938 number
Motor-driven appliances (including motors)	214	249	274
Electrically-heated appliances	191	163	162
Wiring devices (including temperature regulators)	111	71	81
Lighting devices (including electric signs)	115	104	80
Industrial control devices (including transformers, capacitors and rectifiers)	19	22	28
Wire, cable and cord (including cord sets, and service entrance cable)	22	14	30
Radio, sound and picture appliances (including devices for the suppression of radio interference)	34	47	41
Miscellaneous equipment and materials (including medical and dental equipment, welding machines and thermal insulation)	64	115	135

APPROVALS TEST ROOM
Where various types of electrical appliances are examined and tested

In the classified list of applications for approval reports, it will be noted that motor-driven appliances are still being made in an ever-increasing variety. Part of the increase this year is due to the present fad for an electrically-operated shaver; most of those to date are powered with a small motor. Another item which has been submitted in larger quantities is the automatically-controlled coin-operated phonograph. These machines are taking the place of the coin-slot machines, many of which may not now legally be operated in Canada. The continued increase in the number of miscellaneous items submitted means a proportionately larger amount of testing work as there is yet no specification written for such items and the investigation therefore must be carefully carried out.

Additional Staff and Facilities

During the summer three student apprentice engineers were employed in the Approvals Laboratory with worthwhile results. Plans were made and carried out for extending the testing space allotted to this section and most of the testing work is now centralized on the second floor. A soundproofed test room, which is also provided with an exhaust vent to the chimney, has been built for tests which would be noisy or smoky. With the enlarged testing room, newly painted and equipped with efficient electric fixtures, it has been possible to rearrange the testing staff on a more efficient basis. Testing and office work are now carried on in surroundings more conducive to accurate thinking and speedier work.

PRODUCTION AND SERVICE DEPARTMENT

The operations of the machine shop, carpenter shop and garage, as determined by the value of the work done, showed an increase of approximately 15 per cent over that of the previous year.

The work in the machine shop was similar in nature to that of other years and consisted of the manufacture of line hardware, equipment and tools specially designed and developed for the Commission's requirements. This department also assisted the engineering departments in the development of suitable types of live-line tools and meter test benches.

The policy, adopted in 1935, of regularly and systematically inspecting and maintaining the Commission's fleet of 282 trucks was continued. Twenty-three trucks were overhauled in the garage, and 1,130 individual inspections were made in the field by three travelling inspectors. Fewer trucks were overhauled than in recent years due to the larger number purchased and to the higher standard of maintenance resulting from the systematic field inspection.

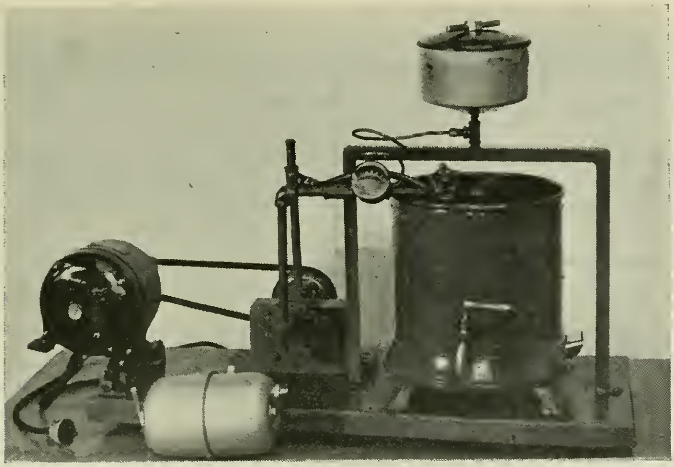
The volume of shop work done by the garage, however, was greater than last year due to the comparatively large amount of equipment overhauled for the Construction department. Fifty-nine pieces of gasoline and diesel driven equipment, such as pumps, compressors, tractors and power units, were thoroughly re-conditioned for the above department.

The formation of a Truck Committee, the members of which were appointed from the Municipal, Operating, Purchasing and Production and Service departments, proved beneficial in co-ordinating the views of the individuals responsible for the operation of the trucks and those who supervise their inspection and maintenance. The suitability and standardization of truck equipment was carefully considered.

PHOTOGRAPHY, PHOTOSTAT AND BLUE PRINTING

The work done in both photography and blue printing shows a large increase over the previous year. There were 734 photograph orders completed, nearly forty per cent more than last year, and 7,472 orders for blue printing, 83,960 prints, an increase of twenty-six per cent. The photographic studio also handled a quantity of special work including enlarging, copying, developing, printing, and the preparation of lantern slides.

The photostat camera has now been in service for a year. A total of 404 orders were handled, which included 3,750 positive prints and 1,180 negative prints. This camera is proving very useful in copying printed matter, drawings, maps, blue prints and other illustrations from books, pamphlets or from



OIL FILTER TESTING EQUIPMENT
For making comparative oil-cleaning tests on car and truck filters

separate sheets. As the orders indicate, positive prints were preferred; these usually require two operations, and, therefore, represent much more work than would be necessary if the preference had been for negative prints.

ELECTRICAL INSPECTION DEPARTMENT

The increasing volume of work handled by this department necessitated that the following offices, which had been amalgamated with others since December 31, 1934, be operated for separate districts:

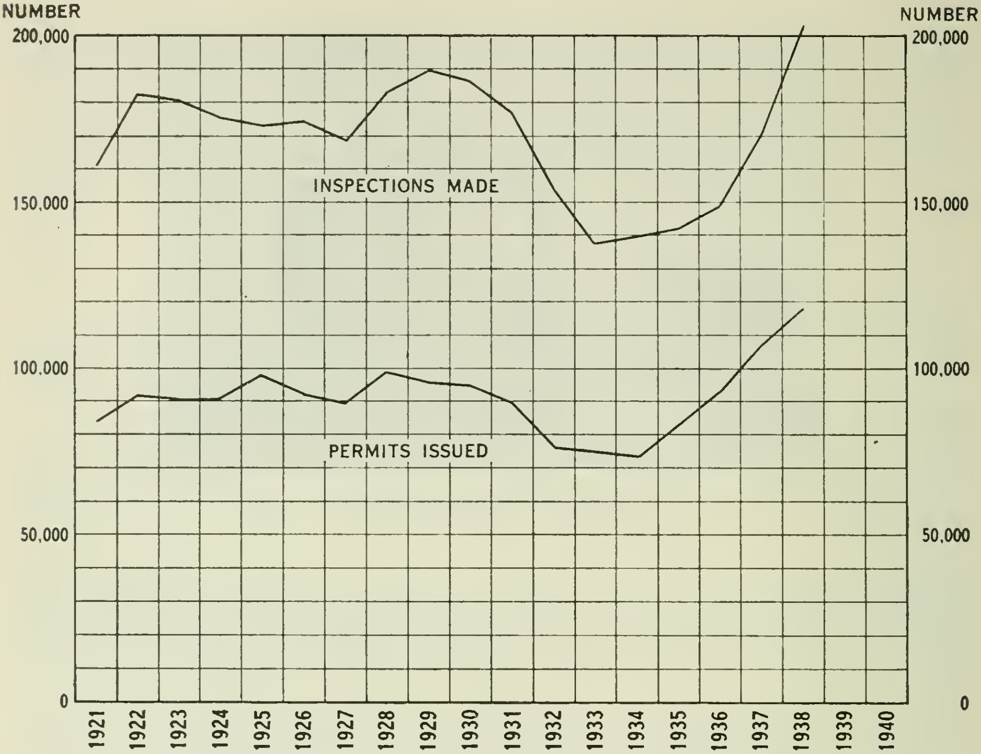
Office Re-opened	*Previously Amalgamated with*
Windsor	District of Chatham
Sarnia	District of Chatham
Peterboro	District of Oshawa
Stratford	District of Kitchener
Haileybury	District of Sudbury
Baysville	District of Barrie

In order to reduce travelling expenses and to give more efficient service, the District of Kitchener was reduced in area and a new office established in Owen Sound.

The foregoing changes, together with the increase in work handled, required the appointment of ten additional full-time inspectors, one part-time inspector, four full-time clerks and one part-time clerk.

Statistical

A total of 117,661 permits was issued, an increase of 9.8 per cent over 1937. This is a record, and an increase of 18.9 per cent over the pre-depression high point which occurred in 1928. There were 203,800 inspections made, an increase of 19.8 per cent over 1937.



The accompanying graph shows the number of permits issued and inspections made since 1921.

Fires Attributed to Electricity

Among the numerous fires investigated during the year and reported as having been caused through electrical wiring or equipment, twelve were traced to that source, as follows:

Short-circuit in armoured cable	4
Short-circuit in non-metallic sheathed cable	1
Short-circuit at unused outlet	1
Iron left in contact with combustible material	1
High-tension sign cable in contact with woodwork	1
Portable lamp in contact with combustible material	1
Transformers not properly grounded	1
Joint in flexible cord	1
Explosion in switch of gasoline dispensing device	1

It is possible that other fires may have had their origin in electrical circuits or appliances, although the evidence available would not fully substantiate such a conclusion.

Electrocutions and Fatal Accidents

Seven persons were electrocuted through coming into contact with electric wiring or equipment under the jurisdiction of this department, as compared with five person in 1937. A brief summary of these accidents is given below:

> Man electrocuted while attempting to cut a cable with a pair of bolt cutters. The line, presumed to be dead, was alive due to a feed-back through a bank of transformers. Circuit voltage, 550 volts.
>
> Boy electrocuted while trying to locate non-existant trouble in a passenger elevator control panel. Circuit voltage, 550 volts.
>
> Man electrocuted when he touched an ungrounded transformer which was being used on his farm by a threshing syndicate. Circuit voltage, 4,000 volts.
>
> Man electrocuted while standing in water testing the vacuum at the intake pipe of an electrically operated private water supply system. The electric motor was defective and its frame was not grounded. Circuit voltage, 115 volts.
>
> Boy electrocuted while attempting to place a toy windmill on the top of a pole which carried wires supplying current to a pump motor on his father's farm. He came in contact with a live circuit wire and a grounded conduit. Circuit voltage, 220 volts.
>
> Boy electrocuted when touching an ungrounded pipe-threading machine which had become alive through a breakdown in the insulation of electric wiring attached to the apparatus. Circuit voltage, 220 volts.
>
> Woman electrocuted when using a portable electric heater in the bathroom. The cord supplying current to the heater was defective. Circuit voltage, 115 volts.

Nine persons were involved in accidents which did not prove fatal. These may be summarized as follows:

> Electrician received superficial burns about the eyes while testing a 550 volt circuit with a 220 volt test lamp.
>
> Two electricians were severely burned when operating disconnecting switches underload.
>
> Two electricians received burns when a defective compensator blew up.
>
> Woman received slight burns when the strain spring on an ironing cord short-circuited open-type cutouts.
>
> Man received severe shock and burns while grasping a 550 volt service wire to balance himself on an upstairs verandah railing.
>
> Man received severe burns while using a screw driver to remove a 60 ampere 600 volt fuse from a service switch.
>
> Electrician received a severe shock, and injuries from resulting fall, when he attempted to repair neon sign wiring while the sign was alive.

Four cattle were electrocuted through contact with live wiring or charged apparatus, as follows:

> Bull electrocuted while tied in stanchion which had become alive due to a defective extension cord being in contact with a private piping system that supplied water to the stanchion drinking fountains. Voltage of circuit, 115 volts.
>
> Three cows were electrocuted when they came into contact with a 2,200 volt line which had fallen due to the poles rotting through at the base.

Ground Tests

There was a total of 6,027 ground tests made in isolated communities and rural districts, an increase of 646, or 12 per cent over 1937.

The Canadian Electrical Code

Several members of the Electrical Inspection and Laboratory staffs have rendered assistance in revising sections of the Canadian Electrical Code, giving a great deal of time to this work.

On Part I of the Code—Electrical Installations—twenty-two meetings were attended. Revisions were considered and also methods of suppressing radio interference. The minutes of these meetings were prepared and circulated.

On Part II—Approval Specifications for Electrical Equipment—there were fifteen meetings, attended by a total of 29 of the Commission's engineers and inspectors, and the minutes were prepared and circulated. Four specifications were issued, and one earlier specification was revised and re-issued. There now have been forty-seven specifications issued by the Canadian Electrical Standards Association, and fourteen more are either advancing toward being issued or in the course of being re-issued.

Infractions of Regulations

Eighty-six persons and companies were prosecuted for various infractions of the rules and regulations governing the sale and installation of electrical equipment and material, a total of fifty-seven prosecutions more than in 1937. This increase was due to additions to the staff of the department, which allowed more time to be devoted to the enforcement of regulations than had been possible in the past.

Safety Rules for Electrical Test Floors

As a result of the inspection of factory electrical testing departments, copies of a set of rules toward safety in such work were forwarded to a number of manufacturers for their trial and criticism.

SECTION VIII

ELECTRIC RAILWAYS

THE HAMILTON STREET RAILWAY COMPANY

A Subsidiary of The Hydro-Electric Power Commission of Ontario—Niagara System

Gross earnings on the Hamilton Street Railway for the year 1938 decreased 2.96 per cent. Operating expenses (including taxes) decreased 6.31 per cent. The result was an increase in net earnings of $29,287. The improvement in net earnings was due to a reduction in power rates.

The balance sheet and income account are given at the end of Section IX.

Operating results are summarized and compared in the following tabulation and chart.

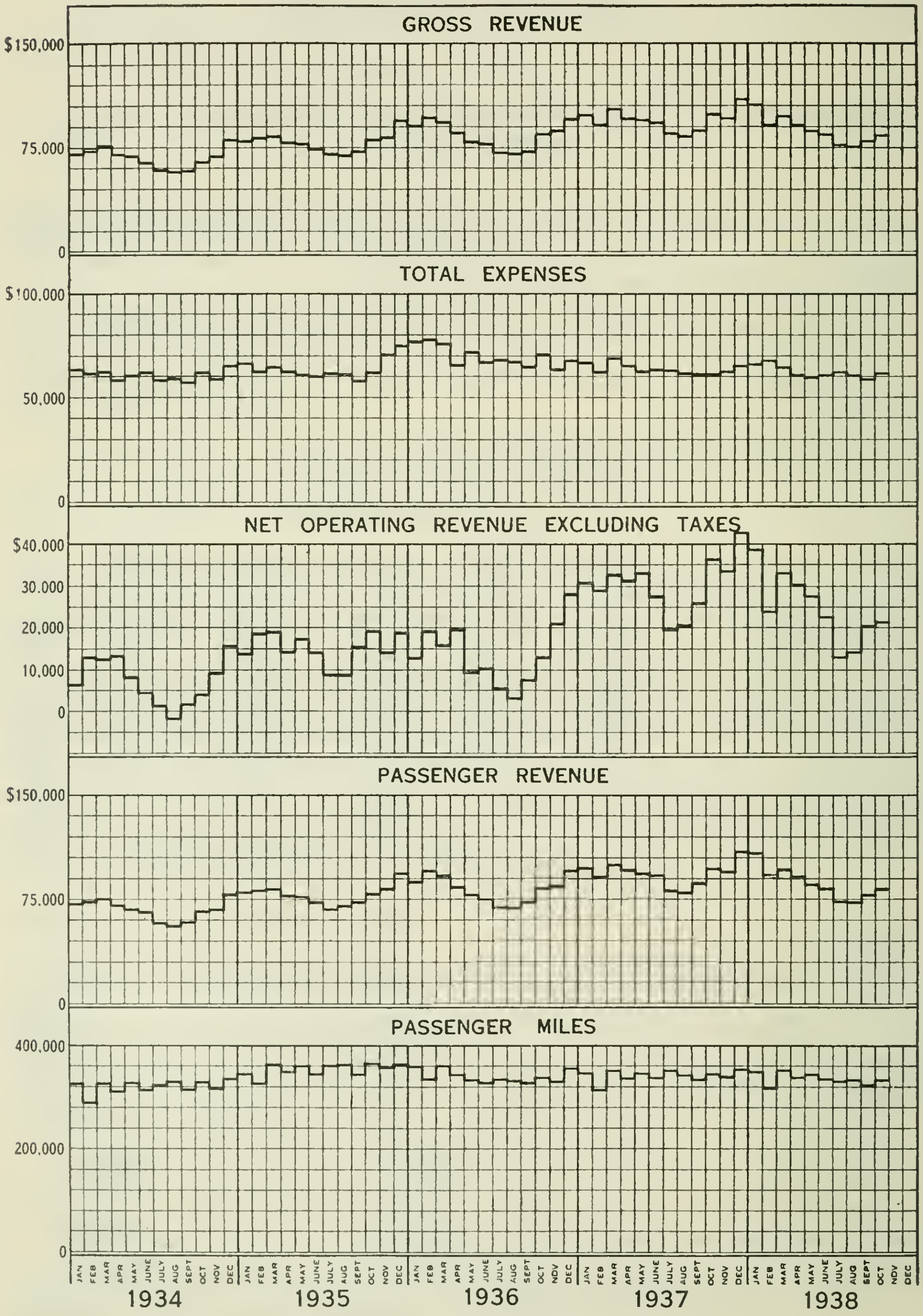
HAMILTON STREET RAILWAY

Comparative Operating Statistics

	1937			1938		
	Tramways $	Buses $	Total $	Tramways $	Buses $	Total $
Operating revenues:						
Transportation	880,086	224,756	1,104,842	840,588	231,602	1,072,190
Other operations	5,140	709	5,849	4,854	825	5,679
Operating revenue	885,226	225,465	1,110,691	845,442	232,427	1,077,869
Operating expenses	805,901	178,490	984,391	735,502	186,780	922,282
Net revenue for year	79,325	46,975	126,300	109,940	45,647	155,587
Appropriation for dividend			122,969			122,969
Appropriation for ticket reserve			3,331			nil
Surplus for year			nil			32,618

	1937	1938
Route-miles:		
Tramway	28.06	28.06
Bus	17.58	17.58
Total	45.64	45.64
Track-miles	42.80	42.80
Passenger cars operated:		
Passenger cars	72	72
Passenger buses	32	32
Car-miles operated:		
Passenger cars	2,769,270	2,722,581
Passenger buses	1,332,572	1,330,301
Car-hours operated:		
Passenger cars	297,903	291,650
Passenger buses	108,303	108,291
Passengers carried	21,277,756	20,007,750
Percentage of transfer passengers to revenue passengers	24.3%	23.9%

THE HAMILTON STREET RAILWAY COMPANY
OPERATING STATISTICS



GUELPH RADIAL RAILWAY

Operated by The Hydro-Electric Power Commission of Ontario for The City of Guelph

There was no major commitment on capital account during the year. Essential maintenance of way and structures, and equipment was performed.

Gross earnings for the year 1938 increased 0.46 per cent. Operating expenses (including taxes) decreased 6.24 per cent. The result was a decrease in net operating loss of $4,980. The improvement was due to the savings effected by the use of modern gasolene buses in place of street cars.

The balance sheet and income account are given at the end of Section IX.

Operating results are summarized in the following tabulation and chart.

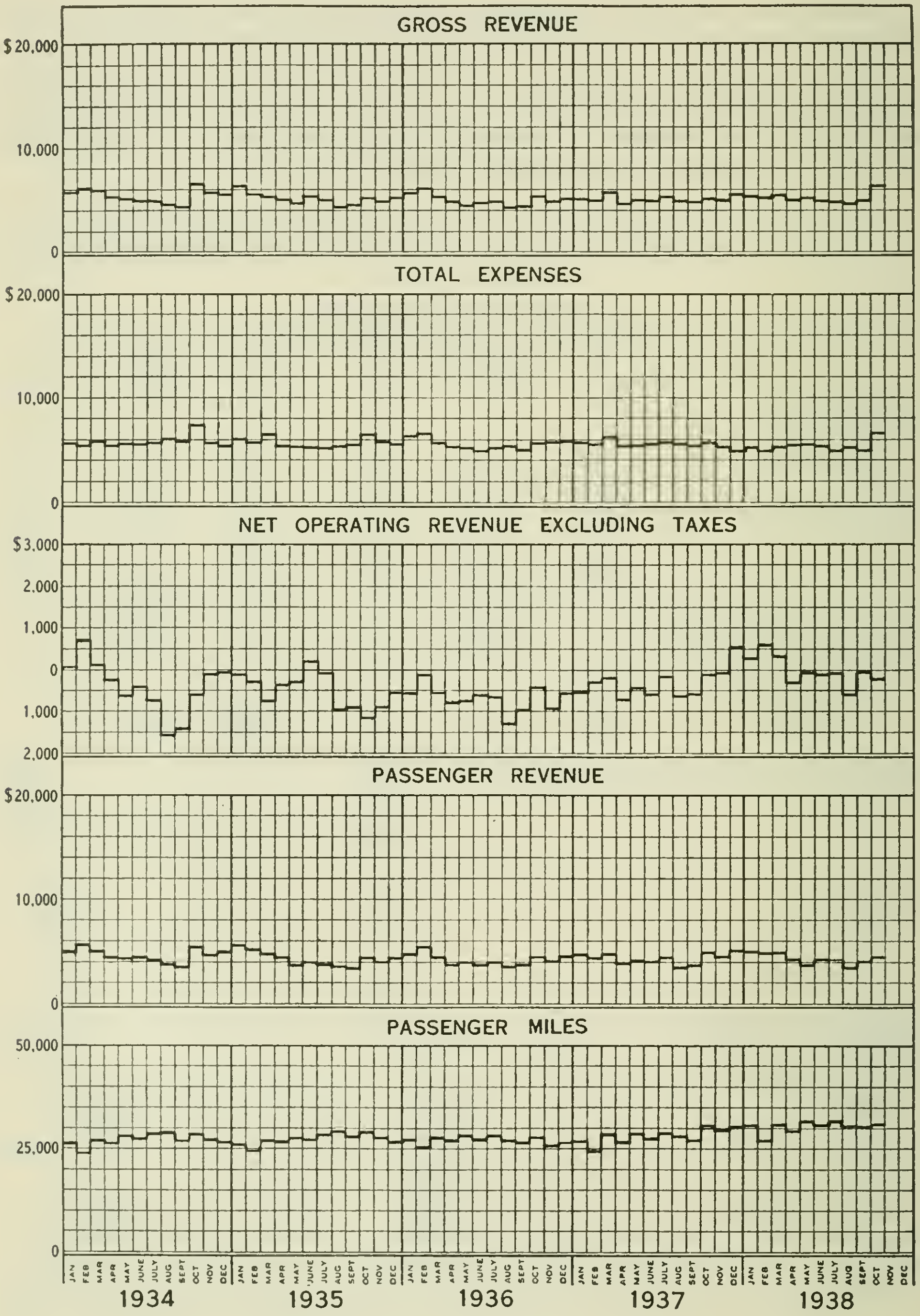
GUELPH RADIAL RAILWAY
Comparative Operating Statistics

		1937			1938	
	Tramways $	Buses $	Total $	Freight $	Buses $	Total $
Operating revenues:						
Transportation	42,621	19,751	62,372	8,849	53,625	62,474
Other operations	474	59	533	267	451	718
Operating revenue	43,095	19,810	62,905	9,116	54,076	63,192
Operating expenses	50,645	24,536	75,181	11,302	59,186	70,488
Net operating loss	7,550	4,726	12,276	2,186	5,110	7,296
Net operating loss as above		12,276			7,296	
Net interest charges		11,687			12,333	
Provision for sinking fund		3,921			3,159	
Provision for instalments under purchase agreement:						
Principal	9,978			10,432		
Interest	1,722	11,700		1,268	11,700	
Adjustment of miscellaneous reserves not required						883
Loss for year charged to the City of Guelph			39,584			33,605
			39,584			34,488

	1937	1938
Route-miles:		
Tramways	6.41	*4.00
Bus	5.99	13.90
Total	12.40	17.90
Track-miles	9.06	4
Passenger cars operated	7	nil
Passenger buses operated	4	9
Car-miles operated:		
Passenger cars	198,770	nil
Passenger buses	129,195	367,533
Freight locomotive	11,298	10,155
Car-hours operated:		
Passenger cars	25,065	nil
Passenger buses	16,290	41,762
Freight locomotive	2,352	2,166
Passengers carried	1,159,572	1,232,671
Percentage of transfer passengers to revenue passengers	26.71%	25.37%

*Freight only.

GUELPH RADIAL RAILWAY—OPERATING STATISTICS



SECTION IX

FINANCIAL STATEMENTS

Relating to

Properties Operated by The Hydro-Electric Power Commission in the Niagara, Georgian Bay, Eastern Ontario and Thunder Bay Systems on Behalf of Municipalities

and to

Northern Ontario Properties Held and Operated by the Commission in Trust for the Province of Ontario

The Hamilton Street Railway Company—A Subsidiary of Niagara System, and

Guelph Radial Railway—Operated by the Commission on Behalf of the City of Guelph

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IN this section of the Report financial statements relating to the activities of The Hydro-Electric Power Commission, segregated into certain distinct divisions, are presented. The first division relates to those activities on behalf of the co-operative municipalities, which are partners in the main "Hydro" undertaking comprising the Niagara, Georgian Bay, Eastern Ontario and Thunder Bay systems and certain minor properties. The second relates to the administration of the Northern Ontario Properties which are held and operated by the Commission in trust for the Province of Ontario. The third and fourth relate to The Hamilton Street Railway Company, a subsidiary of the Niagara system, and to the Guelph Radial Railway operated by the Commission for the city of Guelph.

Co-operative Systems

In the Foreword to this Report a brief reference is made to the basic principle governing the operations of the "Hydro" undertaking in supplying electrical service at cost, and to the *wholesale* and *retail* aspects of the work. A description is also given of the several systems into which the partner municipalities are co-ordinated for securing common action with respect to power supplies, through the medium of The Hydro-Electric Power Commission which, under The Power Commission Act, functions as their Trustee.

Although for the purpose of financial administration the various systems are separate units, there is a similarity of procedure with respect to their operation which enables certain financial statements, as for example the various reserves, to be co-ordinated and presented in summary tables.

The first set of tables in Section IX gives collective results for the co-operative activities related to the four systems and minor associated properties. These tables include a **balance sheet; a statement of operation and cost distribution** as detailed in the "cost of power" tables referred to below; schedules respecting **fixed assets, capital expenditures and grants—rural power districts; power accounts receivable, funded debt issued or assumed, depreciation and obsolescence reserves, contingencies and stabilization of rates reserves, sinking fund reserves** and the **account with the Provincial Treasurer of the Province of Ontario.**

The tables which follow these general financial statements relate more particularly to the individual municipality's aspects of the wholesale activities of the Commission and for each system show the **cost of power** to the individual municipal utilities, the **credit or debit** adjustment that is made at the end of the fiscal year, and the **sinking fund** equity that has been acquired by the individual municipality. There is also included for each system a **rural operating** statement.

The charges for power supplied by the Commission to the various municipalities vary with the amounts of power used, the distances from the sources of supply and other factors. The entire capital cost of the various power developments and transmission systems is annually allocated to the connected municipalities and other wholesale power consumers, according to the relative use made of the lines and equipment. Each municipality assumes responsibility for that portion of property employed in providing and transmitting power for its use, together with such expenses—including the cost of purchased power if any—as are incidental to the provision and delivery of its wholesale power. The annual expenses and the appropriations for reserves are provided out of revenues collected in respect of such power, through the medium of power bills rendered by the Commission. The municipalities are billed at an estimated interim rate each month during the year and credit or debit adjustment is made at the end of the year,* when the Commission's books are closed and the actual cost payable by each municipality for power taken has been determined.

Included in the municipality's remittance to the Commission for the wholesale cost of power—besides such current expenses as those for operation and maintenance of plant, for administration, and for interest on capital—are sums required to build up reserves for sinking fund, for depreciation and obsolescence, for contingencies and for stabilization of rates. The first-mentioned reserve, namely, sinking fund, is being created on a 40-year basis for the purpose of liquidating capital liabilities. The other reserves are, respectively, being created to provide funds for the replacing or rebuilding of plant as it wears out, to enable the undertaking to replace existing equipment with improved equipment as it becomes available through advances in science and invention, and to meet unforeseen expenses which from time to time may arise.

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*The financial year for the Commission ends on October 31. The financial year for the municipal electric utilities, however, ends on December 31, and the municipal accounts are made up to this date, and so recorded in Section X.

The ultimate source of all revenue to meet costs—whether for the larger operations of The Hydro-Electric Power Commission or for the smaller local operations of the municipalities—is, of course, the consumer. Out of the total revenue collected by each municipal utility from its consumers for service supplied, only an amount sufficient to pay the wholesale cost of power supplied by the Commission as outlined above is remitted to the Commission; the balance of municipal electrical revenue is retained to pay for the expense incurred by the local utility in distributing the electrical energy to its consumers.

Tabular Data

The following comments relate to the tabular data presented:

Balance Sheet.—The first tabular statement given in Section IX is a balance sheet showing the assets, and the liabilities of the several co-operative systems.

Statement of Operation and Cost Distributions.—This statement is a summary of operating expenses and fixed charges as shown in the "cost of power" tables relating to the individual systems as referred to more particularly below.

Fixed Assets.—Details are given concerning the various fixed assets of each system and of the miscellaneous properties, whilst similar details are shown of the capital expenditures for the year ended October 31, 1938.

Capital Expenditures and Grants—Rural Power Districts.—This schedule gives summary information respecting the total capital expenditures on rural power districts and grants-in-aid of construction paid or payable by the Province with respect to such rural districts.

Power Accounts Receivable.—This schedule sets forth the amounts collectible from all classes of power consumers and includes the annual adjustment figures from the "credit or charge" statements for municipalities. The main details of those debit balances three months or more overdue are stated.

Funded Debt Issued or Assumed.—This schedule presents a complete list of the securities issued or assumed by the Commission on account of the several systems, the Northern Ontario Properties and the Guelph Radial Railway. It should be noted that where securities have been issued to finance properties operated for others, this liability is only shown in memorandum form on the balance sheet of the Commission, whilst the direct liability is shown on the balance sheets of the Northern Ontario Properties and the Guelph Radial Railway.

Depreciation and Obsolescence Reserves,
Contingencies Reserves and
Stabilization of Rates Reserves.—These schedules show the provisions made to, the expenditures from, and the balance to the credit of, these reserves for each of the systems and other properties included in the power undertakings operated on a cost basis.

Sinking Fund Reserves.—This schedule summarizes the appropriation of principal and interest with respect to these reserves for each of the systems and certain minor properties.

Account with the Provincial Treasurer.—This schedule lists, both for the Niagara and other systems operated on a cost basis, and for the Northern Ontario Properties which are held and operated by the Commission in trust for the Province, the advances from the Province of Ontario and the repayments which have been applied to reduce this liability. It should be noted that Provincial advances to finance Northern Ontario Properties are shown in memorandum form only on the balance sheet of the Commission as the direct liability is carried on the Northern Ontario Properties' balance sheet.

Following these statements, which are common to all systems, there are given for each of the individual co-operative systems four tabular statements as follows:

Cost of Power statement, which shows the apportionment to each municipality of the items of cost summarized in the operating account, as well as the apportionment of the fixed assets in service listed in the balance sheet and the amount of power taken by each municipality. It should be noted that the cost of power given in this table is the wholesale cost—that is, the cost which the Commission receives for the power delivered from the main transformer stations serving the local utility. In the case of municipal electrical utilities not directly administered by the Commission, the respective costs of power appear in Statement "B" of Section X as "power purchased".

Credit or Charge statement, which shows the adjustments made in order to bring the amounts paid by each municipal electric utility to the actual cost of service. The credits and charges for the municipal electric utilities are taken up and given effect to in the accounts of "Hydro" utilities before their operating records of each year are closed.

Sinking Fund statement, which gives the accumulated total of the amounts paid by each municipality as part of the cost of power together with its proportionate share of other sinking funds.

Rural Operating statement, which summarizes for the rural power districts of the system the various items of cost, and the revenues received, in connection with the distribution of electrical energy to rural consumers.

Northern Ontario Properties

The statements and schedules respecting these properties which are held and operated by the Commission in trust for the Province of Ontario include the balance sheet, operating and income accounts, schedules of fixed assets, depreciation and obsolescence reserves, contingencies reserves, and sinking fund reserves. These schedules are similar in form to the corresponding schedules relating to the co-operative systems.

The Hamilton Street Railway Company

This is a subsidiary of the Niagara system of the Commission. A balance sheet and operating and income account are presented.

Guelph Radial Railway

This railway is operated by the Commission on behalf of the city of Guelph. A balance sheet and operating and income account are presented.

Municipal Utilities

All municipal "Hydro" utilities have current expenses to meet similar to the expenses of the Commission and have adopted the same financial procedure with respect to their operations. In other words, concurrently with the creation of funds to liquidate their debt to the Commission and to provide the necessary reserves to protect generating, transforming and transmission systems, the municipalities are taking similar action with respect to their local "Hydro" utility systems.

The balance sheets, operating reports and statistical data appearing in Section X, under the heading of "Municipal Accounts", relate to the operation of local distribution systems by individual municipalities which have contracted with the Commission for their supply of electrical energy. To this section there is an explanatory introduction to which the reader is specially referred.

Auditing of Accounts

The accounts of The Hydro-Electric Power Commission of Ontario are verified by auditors specially appointed by the Provincial Government. The accounts of the "Hydro" utility of each individual municipality are prepared according to approved and standard practice and The Public Utilities Act requires that they shall be audited by the auditors of the municipal corporation.

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

FINANCIAL ACCOUNTS

For the Year Ended October 31, 1938

Relating to Properties operated on a "Cost Basis" for the Co-operating Municipalities and Rural Power Districts which are supplied with Electrical Power and Services from the following Properties:

Niagara System
Georgian Bay System
Eastern Ontario System
Thunder Bay System
Manitoulin Rural Power District
Nipissing Rural Power Districts
Bonnechere Water Storage Works
Service and Administrative Buildings and Equipment

STATEMENTS

Balance Sheet as at October 31, 1938

Statement of Operations and Cost of Power for the Year ended October 31, 1938

Schedules supporting the Balance Sheet as at October 31, 1938:—

- Fixed Assets—By Systems and Properties
- Capital Expenditures and Grants—Rural Power Districts
- Power Accounts Receivable
- Funded Debt Issued or Assumed
- Depreciation and Obsolescence Reserves
- Contingencies Reserves
- Stabilization of Rates Reserves
- Sinking Fund Reserves
- Account with the Provincial Treasurer of the Province of Ontario

Statements for Municipalities Receiving Power under Cost Contracts

THE HYDRO-ELECTRIC POWER

BALANCE SHEET AS AT OCTOBER 31, 1938,

Niagara System **Georgian Bay System** **Eastern Ontario System**

ASSETS

FIXED ASSETS:			
Niagara system		$221,046,213.05	
Georgian Bay system		12,713,543.33	
Eastern Ontario system		24,899,689.37	
Thunder Bay system		19,806,041.24	
Non-System properties		283,306.79	
Service and administrative buildings and equipment		3,207,839.58	
		$281,956,633.36	
Less—Grants-in-aid of construction:			
Province of Ontario—for rural power districts		14,149,666.86	
			$267,806,966.50
PRELIMINARY EXPENDITURES—Inter-System:			
St. Lawrence River surveys—1925 to 1928		$ 734,873.31	
Ottawa River surveys and undeveloped power sites		346,621.53	
Ogoki River surveys		100,807.83	
			1,182,302.67
INVESTMENTS:			
Toronto, Pt. Credit, St. Catharines Radial Railways—secured		$ 2,101,867.40	
The Hamilton Street Railway Company—Capital stock		3,000,000.00	
City of Toronto debentures (Toronto and York Radial)—Collateral		2,375,000.00	
Other investments		12,577.00	
			7,489,444.40
CURRENT ASSETS:			
Cash in banks		$ 6,288,775.28	
Employees' working funds		71,038.14	
Sundry accounts receivable		598,635.22	
Power accounts receivable		3,891,507.50	
Rural power district grants receivable		1,124,558.76	
Interest accrued		655,802.47	
Consumers' and contractors' deposits:			
Cash deposits	$ 53,442.83		
Securities—at par value	519,200.00		
		572,642.83	
Prepayments		138,106.27	
			13,341,066.47
INVENTORIES:			
Construction and maintenance materials and supplies		$ 2,146,998.92	
Construction and maintenance tools and equipment		852,395.57	
Office equipment		85,960.52	
			3,085,355.01
DEFERRED ASSETS:			
Agreements and mortgages		$ 980,135.25	
Rural district loans		98,441.97	
Work in progress—deferred work orders		42,072.46	
			1,120,649.68
UNAMORTIZED DISCOUNT ON DEBENTURES			466,158.67
RESERVE FUNDS:			
Investments—Specific reserves		$ 42,594,471.78	
Employers' Liability Insurance Fund:			
Investments	$978,148.24		
Deposits with the Workmen's Compensation Board	36,194.65		
		1,014,342.89	
Pension Fund, investments		5,562,247.07	
			49,171,061.74
SINKING FUNDS:			
Investments		$ 5,609,732.30	
Deposits in the hands of trustees—including temporary investments		339,487.54	
			5,949,219.84
			$349,612,224.98

COMMISSION OF ONTARIO

IN WHICH THE FOLLOWING PROPERTIES ARE INCLUDED:

Thunder Bay System **Local Distribution Systems** **Rural Power Districts**

LIABILITIES AND RESERVES

LONG-TERM LIABILITIES:			
Funded Debt Issued or Assumed		$119,974,469.58	
Less—Debentures issued to finance properties operated for others:			
Northern Ontario Properties	$ 29,500,000.00		
Guelph Radial Railway	300,000.00		
		29,800,000.00	
		$ 90,174,469.58	
Advances from the Province of Ontario	$148,714,776.93		
Less—Advances for Northern Ontario Properties	6,370,637.25		
		142,344,139.68	
Purchase Agreements:			
Thunder Bay system transmission lines		173,021.20	
			$232,691,630.46
CURRENT LIABILITIES:			
Bank of Montreal—demand loan—secured		$ 500,000.00	
Accounts and payrolls payable	$ 1,966,154.43		
Less—Amount for Northern Ontario Properties	137,801.94		
		1,828,352.49	
Matured debentures unclaimed—due 1933		500.00	
Northern Ontario Properties—Current account		2,444,261.46	
The Hamilton Street Railway Co.—Current account		165,992.88	
Power accounts—credit balances		63,927.08	
Advances from the Province of Ontario for rural loans		104,767.93	
Consumers' and contractors' deposits		591,066.47	
Debenture interest accrued		991,480.51	
Miscellaneous interest accrued		5,722.92	
Miscellaneous accruals		58,073.49	
			6,754,145.23
RURAL POWER DISTRICTS—Rates Suspense, Net			1,153,841.97
UNAMORTIZED PREMIUM ON DEBENTURES			149,139.79
RESERVES:			
Depreciation and obsolescence	$ 40,191,872.36		
Contingencies	8,460,619.54		
Stabilization of rates	5,184,077.45		
Fire insurance	72,441.34		
		$ 53,909,010.69	
Employers' liability insurance		1,018,906.42	
Pension fund		5,569,249.42	
Miscellaneous		454,453.53	
			60,951,620.06
SINKING FUND RESERVE:			
Represented by:			
Funded debt retired through sinking funds		$ 14,722,209.46	
Provincial advances retired through sinking funds		27,261,098.42	
Available balance		5,928,539.59	
			47,911,847.47
			$349,612,224.98

Auditors' Certificate

We have examined the Accounts of The Hydro-Electric Power Commission of Ontario for the year ended the 31st October, 1938, and report that in our opinion the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Commission's affairs at the 31st October, 1938, according to the best of our information and the explanations given to us and as shown by the books and records of the Commission. We have obtained all the information and explanations we have required.

OSCAR HUDSON AND CO.,
Chartered Accountants,
Auditors.

Dated at Toronto, Ontario,
31st March, 1939

THE HYDRO-ELECTRIC POWER

Statement of Operations and Cost of Power for Each

	Cost of power purchased	Operating, maintenance and administrative expenses	Interest	Provision for depreciation and obsolescence	Provision for contingencies
NIAGARA SYSTEM:	$ c.	$ c.	$ c.	$ c.	$ c.
Municipalities	4,123,295.04	2,598,883.88	6,619,074.02	1,009,103.09	438,854.45
Rural power districts	231,836.31	230,800.44	436,270.51	80,647.12	30,900.47
Companies	1,403,991.26	894,409.45	1,991,289.80	281,537.43	129,096.42
Local distribution systems	27,788.80	73,051.41	62,188.42	11,695.77	5,390.34
Total	5,786,911.41	3,797,145.18	9,108,822.75	1,382,983.41	604,241.68
GEORGIAN BAY SYSTEM:					
Municipalities	39,397.29	279,767.02	260,434.49	78,935.83	22,047.66
Rural power districts	11,473.96	55,836.68	54,688.53	17,383.02	4,727.89
Companies	1,902.33	11,397.39	12,166.41	3,780.79	1,041.00
Local distribution systems	875.63	13,059.22	9,726.04	3,658.41	1,402.86
Total	53,649.21	360,060.31	337,015.47	103,758.05	29,219.41
EASTERN ONTARIO SYSTEM:					
Municipalities	673,597.63	484,063.41	583,592.47	139,990.04	45,213.92
Rural power districts	54,683.20	59,321.95	72,598.51	19,547.60	5,853.77
Companies	155,259.23	127,978.27	163,318.92	39,676.82	13,388.69
Local elec. dist. sys	12,771.03	49,246.65	26,341.13	8,810.99	1,387.62
Local gas dist. sys	....	14,995.01	1,184.38	....	....
Pulp mill	8,922.88	28,296.99	12,734.95	2,006.47	783.95
Total	905,233.97	763,902.28	859,770.36	210,031.92	66,627.95
THUNDER BAY SYSTEM:					
Municipalities	....	190,574.59	520,937.45	100,054.31	53,113.08
Rural power districts	....	1,895.55	3,216.48	652.82	329.79
Companies and local distribution systems	....	157,523.08	367,828.97	57,630.27	32,409.50
Total	....	349,993.22	891,982.90	158,337.40	85,852.37
COST OF DISTRIBUTION OF POWER WITHIN R.P.D.'S:					
Niagara system R.P.D	*1,113,512.31	642,083.61	402,716.64	175,497.98	....
Georgian Bay sys. R.P.D.	*171,999.83	110,990.34	67,455.23	30,063.24	....
Eastern Ontario sys. R.P.D.	*242,638.57	174,693.02	119,796.53	51,788.09	....
Thunder Bay sys. R.P.D.	*6,693.80	5,926.75	3,785.44	1,652.62	....
Manitoulin R.P.D	4,776.54	2,579.39	2,272.00	809.55	....
Nipissing R.P.D	8,032.46	3,012.28	2,121.78	715.38	....
Total	1,547,653.51	939,285.39	598,147.62	260,526.86	....
RURAL LINES OPERATED BY MUNICIPALITIES:					
Niagara rural lines	....	....	845.80	401.17	200.59
Georgian Bay rural lines	....	....	155.66	56.74	28.37
Total	....	....	1,001.46	457.91	228.96
Total for all systems	8,293,448.10	6,210,386.38	11,796,740.56	2,116,095.55	786,170.37
R.P.D.'s eliminations	*(1,534,844.51)	....	....	....	....
Net total for all systems	6,758,603.59	6,210,386.38	11,796,740.56	2,116,095.55	786,170.37
GRAND SUMMARY					
Niagara system	5,786,911.41	4,439,228.79	9,512,385.19	1,558,882.56	604,442.27
Georgian Bay system	53,649.21	471,050.65	404,626.36	133,878.03	29,247.78
Eastern Ontario system	905,233.97	938,595.30	979,566.89	261,820.01	66,627.95
Thunder Bay system	....	355,919.97	895,768.34	159,990.02	85,852.37
Non-System properties	12,809.00	5,591.67	4,393.78	1,524.93	....
	6,758,603.59	6,210,386.38	11,796,740.56	2,116,095.55	786,170.37

COMMISSION OF ONTARIO

System for the Year Ended October 31, 1938

Provision for stabilization of rates	Provision for sinking fund	Operating balances in respect of power sold to private companies	Total cost	Amount received from (orbilledagainst) municipalities and other customers	Amounts remaining to be credited or charged municipalities	
					Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	1,531,641.57	37,279.07	16,358,131.12	16,099,817.83	250,331.25	508,644.54
	100,952.15	2,105.31	*1,113,512.31	*1,113,512.31		
	460,780.82	(32,216.50)	5,128,888.68	5,128,888.68		
	14,412.22	(7,167.88)	187,359.08	187,359.08		
	2,107,786.76		22,787,891.19	22,529,577.90	250,331.25	508,644.54
72,243.90	63,745.96	499.19	817,071.34	904,056.78	87,062.70	77.26
14,404.20	13,385.99	99.56	*171,999.83	*171,999.83		
	2,977.94	(3,045.73)	30,220.13	30,220.13		
	2,380.63	2,446.98	33,549.77	33,549.77		
86,648.10	82,490.52		1,052,841.07	1,139,826.51	87,062.70	77.26
73,280.80	134,832.64	50,377.19	2,184,948.10	2,278,105.58	96,491.23	3,333.75
8,213.80	16,773.14	5,646.60	*242,638.57	*242,638.57		
	44,515.52	(42,154.89)	501,982.56	501,982.56		
	3,886.72	12,565.33	115,009.47	115,009.47		
		(3,287.94)	12,891.45	12,891.45		
	2,383.67	(23,146.29)	31,982.62	31,982.62		
81,494.60	202,391.69		3,089,452.77	3,182,610.25	96,491.23	3,333.75
	119,740.99	(24,690.80)	959,729.62	944,530.30	823.16	16,022.48
	739.32	(140.16)	*6,693.80	*6,693.80		
	162,090.62	24,830.96	802,313.40	802,313.40		
	282,570.93		1,768,736.82	1,753,537.50	823.16	16,022.48
					R. P. D.	Balances
	93,187.90		2,426,998.44	2,513,583.83	86,585.39	
	16,510.85		397,019.49	365,266.27		31,753.22
	27,677.68		616,593.89	624,335.18	7,741.29	
	870.10		18,928.71	18,029.54		899.17
	458.13		10,895.61	10,599.58		296.03
	380.56		14,262.46	16,085.01	1,822.55	
	139,085.22		3,484,698.60	3,547,899.41	96,149.23	32,948.42
	361.05		1,808.61	1,808.61		
	51.07		291.84	291.84		
	412.12		2,100.45	2,100.45		
168,142.70	2,814,737.24		32,185,720.90	32,155,552.02	530,857.57	561,026.45
			(*1,534,844.51)	(*1,534,844.51)		
168,142.70	2,814,737.24		30,650,876.39	30,620,707.51	530,857.57	561,026.45
	2,201,335.71		24,103,185.93	23,931,458.03	336,916.64	508,644.54
86,648.10	99,052.44		1,278,152.57	1,333,384.79	87,062.70	31,830.48
81,494.60	230,069.37		3,463,408.09	3,564,306.86	104,232.52	3,333.75
	283,441.03		1,780,971.73	1,764,873.24	823.16	16,921.65
	838.69		25,158.07	26,684.59	1,822.55	296.03
168,142.70	2,814,737.24		30,650,876.39	30,620,707.51	530,857.57	561,026.45

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
Fixed Assets—October 31, 1938
NIAGARA SYSTEM

	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable including lands, water rights and intangible	Depreciable	
Power Plants:	$ c.	$ c.	$ c.	$ c.	$ c.
Niagara river:					
Queenston-Chippawa	*1,000.53*	....	47,962,329.96	28,862,644.97	76,824,974.93
Ontario Power	109,475.47	123,876.82	7,281,151.42	14,794,006.46	22,199,034.70
Toronto Power	*6,011.02*	....	3,823,511.60	7,691,664.91	11,515,176.51
Ottawa river:					
Chats Falls	7,260.65	281.39	808,202.57	6,292,776.10	7,101,260.06
Welland canal:					
DeCew Falls	*9,756.28*	20,416.71	8,323,994.91	3,347,565.58	11,691,977.20
Hamilton steam plant	584.69	....	502,390.58	....	502,390.58
	100,552.98	144,574.92	68,701,581.04	60,988,658.02	129,834,813.98
Transformer Stations:					
Southern Ontario	673,524.85	438,620.82	....	26,866,825.86	27,305,446.68
Eastern—Chats Falls	1,101,872.47	1,145,133.75	....	8,875,289.68	10,020,423.43
	1,775,397.32	1,583,754.57	....	35,742,115.54	37,325,870.11
Transmission Lines:					
Southern Ontario:					
Right-of-way	8,652.68	6,437.83	6,971,902.14	....	6,978,339.97
Lines	190,015.91	305,482.94	....	18,212,337.16	18,517,820.10
Eastern—Chats Falls:					
Right-of-way	647.71	....	1,642,327.70	....	1,642,327.70
Lines	*97.78*	....	....	7,501,284.25	7,501,284.25
	199,218.52	311,920.77	8,614,229.84	25,713,621.41	34,639,772.02
Local Systems:					
Niagara peninsula and Dundas area	21,084.39	....	....	253,341.34	253,341.34
Lincoln Electric:					
St. Catharines system	*62.64*	....	....	187,405.22	187,405.22
	21,021.75	....	....	440,746.56	440,746.56
Sub-total	2,096,190.57	2,040,250.26	77,315,810.88	122,885,141.53	202,241,202.67
Rural Power Districts:					
H-E.P.C. investment	1,142,489.29	99,663.21	....	9,337,822.59	9,437,485.80
Government grants	1,138,276.32	99,662.74	....	9,247,803.42	9,347,466.16
	2,280,765.61	199,325.95	....	18,585,626.01	18,784,951.96
Rural Lines:					
Welland and Milton	....	....	....	20,058.42	20,058.42
	4,376,956.18	2,239,576.21	77,315,810.88	141,490,825.96	221,046,213.05

	Cost statements	Transfers for cost purposes	Fixed assets as above
	$ c.	$ c.	$ c.
Cost of Power schedules	202,179,126.05	62,076.62	202,241,202.67
Rural Operating schedules	9,499,562.42	*62,076.62*	9,437,485.80
Rural Lines schedule	20,058.42	....	20,058.42

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Fixed Assets—October 31, 1938

GEORGIAN BAY SYSTEM

	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable incl. lands, water rights and intangible	Depreciable	
	$ c.	$ c.	$ c.	$ c.	$ c.
Power Plants:					
Musquash river:					
Bala No. 1 and No. 2 plants..	....	....	70,468.43	50,610.70	121,079.13
Ragged Rapids.............	806,818.78	....	22,505.28	1,195,930.12	1,218,435.40
Lands and water rights (Ragged Rapids, Big Eddy, Sandy Grey and Go Home developments)............	....	....	48,023.87	....	48,023.87
Severn river:					
Wasdells..................	1,728.76	....	15,302.32	134,284.24	149,586.56
Big Chute.................	674.18	....	122,540.48	549,290.48	671,830.96
Preliminary surveys.........	....	....	4,107.56	....	4,107.56
Beaver river:					
Eugenia..................	3,547.41	562.57	148,980.43	1,090,443.65	1,239,986.65
Saugeen river:					
Hanover and Maple Hill.....	*3,750.00*	....	16,000.00	25,932.55	41,932.55
Walkerton.................	*1,485.00*	....	97,721.83	114,099.03	211,820.86
Southampton...............	*736.44*	....	69,462.43	68,646.32	138,108.75
Muskoka river:					
South Falls................	114.15	....	17,365.93	438,600.90	455,966.83
Trethewey Falls...........	....	....	51,549.31	305,516.96	357,066.27
Hanna Chute..............	....	....	34,520.82	207,624.55	242,145.37
Hollow Lake dam..........	14.45	....	16,569.79	29,540.16	46,109.95
Preliminary surveys........	....	....	14,912.93	....	14,912.93
Sauble river:					
Lands and rights..........	*101.50*	....	20,858.09	....	20,858.09
Gull river:					
Lands and rights..........	....	....	5,859.20	....	5,859.20
	806,824.79	562.57	776,748.70	4,210,519.66	4,987,830.93
Transformer Stations..........	94,079.34	7,492.82	....	1,346,641.40	1,354,134.22
Transmission Lines...........	78,769.69	21,426.25	....	2,717,491.41	2,738,917.66
Local Systems................	6,090.11	....	....	93,388.18	93,388.18
Sub-total...............	985,763.93	29,481.64	776,748.70	8,368,040.65	9,174,270.99
Rural Power Districts:					
H-E.P.C. investment.........	452,613.87	34,702.61	....	1,796,562.24	1,831,264.85
Government grants..........	433,684.95	34,516.78	....	1,670,653.54	1,705,170.32
	886,298.82	69,219.39	....	3,467,215.78	3,536,435.17
Rural Lines:					
Brechin and Flesherton.......	*13.00*	....	....	2,837.17	2,837.17
	1,872,049.75	98,701.03	776,748.70	11,838,093.60	12,713,543.33

	Cost statements	Transfers for cost purposes	Fixed assets as above
	$ c.	c.	$ c.
Cost of power schedules.........................	9,159,237.07	15,033.92	9,174,270.99
Rural Operating schedule........................	1,846,298.77	*15,033.92*	1,831,264.85
Rural Lines schedule............................	2,837.17	....	2,837.17

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
Fixed Assets— October 31, 1938
EASTERN ONTARIO SYSTEM

	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable incl. lands, water rights and intangible	Depreciable	
Power Plants:	$ c.	$ c.	$ c.	$ c.	$ c.
Fenelon river:					
Fenelon Falls	*82.00*		60,000.00	84,322.33	144,322.33
Otonabee river:					
Auburn	243.82	33.37	31,400.00	288,540.78	319,974.15
Douro				68,478.30	68,478.30
Lakefield	1,524.76		19,620.05	217,016.44	236,636.49
Youngs Point	1,330.13	518.52	2,180.81	7,813.69	10,513.02
Trent river:					
Heely Falls	496.56	35.26		1,186,642.08	1,186,677.34
Seymour	571.56	571.56		300,528.81	301,100.37
Ranney Falls	490.17	1,107.77		1,339,351.32	1,340,459.09
Ranney Falls No. 3	12,885.20		19,596.20	54,598.17	74,194.37
Hagues Reach	*35.00*			573,452.30	573,452.30
Meyersburg	270.84	270.84		836,958.33	837,229.17
Sills Island	17,905.84	18,557.52	38,679.36	218,373.41	275,610.29
Frankford	332.62			252,400.03	252,400.03
Sydney	*300.00*	4.76		251,800.29	251,805.05
Deer river:					
Cordova Power Site			2,234.69		2,234.69
Gull river:					
Norland and Elliot Chute Site			17,577.60		17,577.60
Mississippi river:					
High Falls	555.46	384.55	13,113.84	685,653.79	699,152.18
Carleton Place			7,929.06	49,847.10	57,776.16
Galetta	149.19		20,000.00	128,117.75	148,117.75
Ragged Chutes, Playfair and Appleton Sites			52,272.85		52,272.85
Rosebank and Blakeney Sites			23,321.18		23,321.18
Surveys			10,594.39		10,594.39
Madawaska river:					
Calabogie	5,819.38	4,689.95	80,825.74	666,236.62	751,752.31
Storage Dam			2,555.00	16,075.18	18,630.18
Undeveloped Sites			650,000.00		650,000.00
Miscellaneous equipment				46,504.47	46,504.47
Inactive plant		7.00			7.00
Intangible			2,217,761.29		2,217,761.29
	42,158.53	26,181.10	3,269,662.06	7,272,711.19	10,568,554.35
Transformer Stations	30,291.44	13,173.49		3,004,144.53	3,017,318.02
Transmission Lines	46,797.96	25,027.43	297,438.28	4,883,565.21	5,206,030.92
Local and Rural Systems	133.35			208,251.21	208,251.21
Campbellford Pulp Mill				52,559.93	52,559.93
Cobourg Gas Works	*500.00*			25,913.01	25,913.01
Sub-total	118,881.28	64,382.02	3,567,100.34	15,447,145.08	19,078,627.44
Rural Power Districts					
H-E.P.C. investment	563,133.76	78,964.91		2,853,695.44	2,932,660.35
Government grants	559,341.61	78,964.90		2,809,436.68	2,888,401.58
	1,122,475.37	157,929.81		5,663,132.12	5,821,061.93
	1,241,356.65	222,311.83	3,567,100.34	21,110,277.20	24,899,689.37

	Cost statements	Transfers for cost purposes	Fixed assets as above
	$ c.	$ c.	$ c.
Cost of power schedules	19,041,983.81	36,643.63	19,078,627.44
Rural Operating schedules	2,969,303.98	*36,643.63*	2,932,660.35

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
Fixed Assets—October 31, 1938
THUNDER BAY SYSTEM

	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable incl. lands, water rights and intangible	Depreciable	
Power Plants:	$ c.	$ c.	$ c.	$ c.	$ c.
Nipigon river:					
Cameron Falls	115,545.22	116,161.05	236,600.51	8,792,665.10	9,145,426.66
Alexander	*686.75*		76,898.44	5,371,664.32	5,448,562.76
Virgin Falls Dam			55,450.41	426,736.74	482,187.15
Deficit, 1921-1923			620,818.33		620,818.33
	114,858.47	116,161.05	989,767.69	14,591,066.16	15,696,994.90
Transformer Stations	62,207.11	243.25		1,204,182.73	1,204,425.98
Transmission Lines	14,280.06	6,747.95	326,321.17	2,321,358.57	2,654,427.69
Local Systems	15,366.42			57,443.93	57,443.93
Sub-total	206,712.06	123,152.25	1,316,088.86	18,174,051.39	19,613,292.50
Rural Power Districts:					
H-E.P.C. investments	25,560.64	379.40		95,994.97	96,374.37
Government grants	25,560.64	379.39		95,994.98	96,374.37
	51,121.28	758.79		191,989.95	192,748.74
	257,833.34	123,911.04	1,316,088.86	18,366,041.34	19,806,041.24

	Cost statements	Preliminary expenditures	Fixed assets as above
	$ c.	$ c.	$ c.
Cost of Power schedules	19,714,100.33	*100,807.83*	19,613,292.50
Rural Operating schedules	96,374.37		96,374.37

NON-SYSTEM PROPERTIES

	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable incl. lands, water rights and intangible	Depreciable	
Bonnechere River Storage:	$ c.	$ c.	$ c.	$ c.	$ c.
Round Lake dam				23,185.58	23,185.58
Deficit 1917-1931			28,556.30		28,556.30
			28,556.30	23,185.58	51,741.88
Nipissing Rural Power District:					
H-E.P.C. investment	9,506.48	21.12		44,674.48	44,695.60
Government grants	9,506.49	21.11		43,930.75	43,951.86
	19,012.97	42.23		88,605.23	88,647.46
Manitoulin Rural Power Dist.					
Transformer Station	450.99			5,549.10	5,549.10
Transmission lines					
H-E.P.C. investment	31,405.22	30,535.62		38,530.16	69,065.78
	31,856.21	30,535.62		44,079.26	74,614.88
Government grants	31,405.22	30,535.61		37,766.96	68,302.57
	63,261.43	61,071.23		81,846.22	142,917.45
	82,274.40	61,113.46	28,556.30	193,637.03	283,306.79

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Fixed Assets—October 31, 1938

SERVICE AND ADMINISTRATIVE BUILDINGS AND EQUIPMENT

	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable including lands	Depreciable	
	$ c.	$ c.	$ c.	$ c.	$ c.
Administrative Buildings:					
Toronto:					
University Avenue......	24,773.37	20,099.55	195,837.00	1,464,264.37	1,680,200.92
Elm and Centre Streets..	....	....	....	160,821.95	160,821.95
	24,773.37	20,099.55	195,837.00	1,625,086.32	1,841,022.87
Service Bldgs. & Equipment:					
Toronto:					
Strachan Avenue.......	12,135.50	....	....	531,609.22	531,609.22
1379 Bloor Street West..	63,137.41	13,137.41	....	50,000.00	63,137.41
Cobourg.................	*9.00*	....	....	22,070.08	22,070.08
Hamilton................	....	....	441,439.88	308,560.12	750,000.00
	75,263.91	13,137.41	441,439.88	912,239.42	1,366,816.71
	100,037.28	33,236.96	637,276.88	2,537,325.74	3,207,839.58

SUMMARY

	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable including lands, water rights and intangible	Depreciable	
	$ c.	$ c.	$ c.	$ c.	$ c.
Niagara system.........	4,376,956.18	2,239,576.21	77,315,810.88	141,490,825.96	221,046,213.05
Georgian Bay system....	1,872,049.75	98,701.03	776,748.70	11,838,093.60	12,713,543.33
Eastern Ontario system..	1,241,356.65	222,311.83	3,567,100.34	21,110,277.20	24,899,689.37
Thunder Bay system....	257,833.34	123,911.04	1,316,088.86	18,366,041.34	19,806,041.24
Non-system properties...	82,274.40	61,113.46	28,556.30	193,637.03	283,306.79
Service and administrative buildings and equipment..........	100,037.28	33,236.96	637,276.88	2,537,325.74	3,207,839.58
	7,930,507.60	2,778,850.53	83,641,581.96	195,536,200.87	281,956,633.36
Less: Grants-in-aid of construction:					
Province of Ontario—for rural power districts............	2,197,775.23	244,080.53	....	13,905,586.33	14,149,666.86
	5,732,732.37	2,534,770.00	83,641,581.96	181,630,614.54	267,806,966.50

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

CAPITAL EXPENDITURES AND GRANTS—RURAL POWER DISTRICTS

Summary at October 31, 1938

Statement showing the total capital expenditures to October 31, 1938, on the construction of Primary and Secondary lines in Rural Power Districts; the portion thereof in course of construction; and the investment in lines in operation; also the amounts of the Grants (fifty percent of both Primary and Secondary lines) paid or payable to the Commission by the Province of Ontario up to October 31, 1938

System	Total capital expenditure	In course of construction	In operation	Grants (50% of Primary and Secondary lines) paid or payable by the Province as authorized by Orders-in-Council*
	$ c.	$ c.	$ c.	$ c.
Niagara system	18,784,951.96	199,325.95	18,585,626.01	9,347,466.16
Georgian Bay system	3,536,435.17	69,219.39	3,467,215.78	1,705,170.32
Eastern Ontario system	5,821,061.93	157,929.81	5,663,132.12	2,888,401.58
Thunder Bay system	192,748.74	758.79	191,989.95	96,374.37
Non-System properties:				
Nipissing district	88,647.46	42.23	88,605.23	43,951.86
Manitoulin district	137,368.35	61,071.23	76,297.12	68,302.57
Totals	28,561,213.61	488,347.40	28,072,866.21	14,149,666.86

*Grants not made by Province in respect of one summer resort, street lighting systems in 73 districts, service buildings in 3 districts and amounts paid for business already established (hereinafter called Intangible Assets) in 11 rural distribution systems purchased from private companies.

Note:

The Grants payable by the Province—as above set out—in respect of rural power districts as at October 31, 1938, amount in the aggregate to	$14,149,666.86	
The cash paid over by the Province to the Commission up to October 31, 1938 on account of authorized grants to rural power districts—amounts to	13,025,108.10	
Balance payable by Province		$1,124,558.76

THE HYDRO-ELECTRIC POWER

Power Accounts Receivable

System or Property	Wholesale power consumers			
	Interim power bills	Accumulated amount standing as a charge or credit on October 31, 1938		Net total for wholesale consumers
		Charge	Credit	
	$ c.	$ c.	$ c.	$ c.
NIAGARA SYSTEM:				
Municipalities	1,703,267.90	513,300.18	273,673.83	1,942,894.25
Companies	492,862.30	....	....	492,862.30
Rural and local	....	....	....	....
Lincoln Electric	....	....	....	....
	2,196,130.20	513,300.18	273,673.83	2,435,756.55
GEORGIAN BAY SYSTEM:				
Municipalities	104,687.99	81.10	87,688.13	17,080.96
Companies	2,733.51	....	....	2,733.51
Rural and local	....	....	....	....
	107,421.50	81.10	87,688.13	19,814.47
EASTERN ONTARIO SYSTEM:				
Municipalities	280,474.72	3,319.28	98,527.81	185,266.19
Companies	52,618.77	....	....	52,618.77
Rural	....	....	....	....
Local	....	....	....	....
	333,093.49	3,319.28	98,527.81	237,884.96
THUNDER BAY SYSTEM:				
Municipalities	161,772.20	15,929.47	832.15	176,869.52
Companies	106,622.12	....	....	106,622.12
Rural and local	....	....	....	....
	268,394.32	15,929.47	832.15	283,491.64
NON-SYSTEM PROPERTIES:				
Nipissing rural	....	....	....	....
Manitoulin rural	....	....	....	....
	....	....	....	....
Grand totals	2,905,039.51	532,630.03	460,721.92	2,976,947.62

COMMISSION OF ONTARIO

—October 31, 1938

Retail power consumers—local and rural districts	Net total power accounts receivable	Balance sheet figures		Debit balances three months or more overdue
		Debit balances	Credit balances	
$ c.	$ c.	$ c.	$ c.	$ c.
....	1,942,894.25	1,990,107.94	47,213.69	....
....	492,862.30	492,862.30	....	....
534,756.99	534,756.99	534,756.99	....	34,566.57
4,549.49	4,549.49	4,549.49	....	35.92
539,306.48	2,975,063.03	3,022,276.72	47,213.69	34,602.49
....	17,080.96	31,243.68	14,162.72	....
....	2,733.51	2,733.51	....	....
131,077.59	131,077.59	131,077.59	....	6,071.78
131,077.59	150,892.06	165,054.78	14,162.72	6,071.78
....	185,266.19	187,396.76	2,130.57	....
....	52,618.77	52,618.77	....	....
150,484.21	150,484.21	150,484.21	....	10,903.61
13,741.75	13,741.75	13,741.75	....	217.49
164,225.96	402,110.92	404,241.49	2,130.57	11,121.10
....	176,869.52	177,289.62	420.10	....
....	106,622.12	106,622.12	....	27,943.01
9,241.47	9,241.47	9,241.47	....	1,271.10
9,241.47	292,733.11	293,153.21	420.10	29,214.11
2,814.19	2,814.19	2,814.19	....	70.37
3,967.11	3,967.11	3,967.11	....	6.66
6,781.30	6,781.30	6,781.30	....	77.03
850,632.80	3,827,580.42	3,891,507.50	63,927.08	81,086.51

THE HYDRO-ELECTRIC POWER

Funded Debt Issued or

Description	Application of proceeds
4½% H-E.P.C. debentures	Refunding Toronto Power Co.
2¼—2⅜% serial debentures	Repayment of Province of Ont. advances
5% H-E.P.C. debentures	Refunding Toronto Power Co.
6% " "	Toronto Power Co.
6% " "	T. & Y. R.R. equipment.
2½% " "	Refunding Prov. of Ont. advances, etc.
6% " "	Refunding Ontario Power Co.
3½% " "	Refunding D. P. & T. and E. D. Co.'s.
5% Ontario Power Co. bonds	Ontario Power Co.
2½% H-E.P.C. debentures	Refunding Prov. of Ont. advances, etc.
5% Ontario Transmission Co. bonds	Ontario Transmission Co.
4% H-E.P.C. debentures	Ontario Power Co.
4% " "	Essex system.
4% " "	Thorold system.
4¾% " "	Dominion Power & Transmission Co.
3¼% " "	Refunding Toronto Power Co.
3% " "	Financing Plant Extensions
Municipal debentures assumed	
RADIAL RAILWAYS:	
6% Hydro-Electric Railway bonds	Toronto & York Radial.
Funded Debt as shown on the Balance Sheet of The Hydro-Electric Power Commission of Ontario	
NORTHERN ONTARIO PROPERTIES:	
2½% H-E.P.C. debentures	Abitibi & St. Joseph districts.
2½% " "	Refunding Ontario Power Service Corp'n and for financing plant extensions...
3½% " "	
3% " "	Financing Plant Extensions
GUELPH RADIAL RAILWAY:	
5% Hydro-Electric Railway bonds	Extensions and betterments.
Funded Debt relating to all properties vested in, or operated by, the Commission	
*$3,000,000.00 transferred to Northern Ontario Pro	perties as at October 31st, 1938.
Hydro-Electric Radial Railway Bonds pledged with the Bank of Montreal as security for loan of $500,000.00:	
5% Hydro-Electric Railway bonds	Port Credit & St. Catharines Radial....
Hydro-Radial debentures assumed by the Sandwich, Windsor and Amherstburg Railway Co. and the Province of Ontario	Essex County Railway.

COMMISSION OF ONTARIO

Assumed—October 31, 1938

Date of issue	Date of maturity	Principal outstanding October 31, 1938	Interest for the year 1937-1938	Interest accrued October 31, 1938
		$ c.	$ c.	$ c.
February 1, 1933	February 1, 1938	9,000,000.00	101,250.00	....
March 15, 1937	September15,1937–39	4,000,000.00	144,687.50	11,562.50
June 16, 1924	June 15, 1939	4,000,000.00	200,000.00	75,000.00
December 1, 1920	December 1, 1940	413,200.00	24,792.00	10,330.00
December 1, 1920	December 1, 1940	205,800.00	12,348.00	5,145.00
March 1, 1936	March 1, 1941	10,000.000.00	250,000.00	41,666.67
June 24, 1921	June 24, 1941	3,200,000.00	192,000.00	67,857.53
January 1, 1935	January 1, 1943	10,000,000.00	350,000.00	116,666.66
February 1, 1903	February 1, 1943	7,472,000.00	377,700.86	93,400.00
June 15, 1936	June 15, 1944	10,000,000.00	250,000.00	93,750.00
May 1, 1905	May 1, 1945	1,201,000.00	60,050.00	....
August 1, 1917	August 1, 1957	8,000,000.00	320,000.00	80,000.00
June 1, 1918	June 1, 1958	200,000.00	8,000.00	3,333.34
December 1, 1918	December 1, 1958	100,000.00	4,000.00	1,666.67
January 1, 1930	January 1, 1970	13,000,000.00	617,500.00	205,833.33
February 1, 1938	February 1, 1953	9,000,000.00	219,375.00	73,125.00
August 1, 1938	August 1, 1948	7,000,000.00	74,178.10*	52,500.00
		87,792,000.00	3,205,881.46	931,836.70
Various	Various	7,469.58	1,130.63	268.81
		87,799,469.58	3,207,012.09	932,105.51
December 1, 1920	December 1, 1940	2,375,000.00	142,500.00	59,375.00
....	....	90,174,469.58	3,349,512.09	991,480.51
March 1, 1936	March 1, 1941	5,000,000.00	125,000.00	20,833.33
April 1, 1937	April 1, 1942	11,000,000.00	275,000.00	22,916.66
April 1, 1937	April 1, 1947	8,000,000.00	280,000.00	23,333.33
August 1, 1938	August 1, 1948	5,500,000.00	18,544.52*	41,250.00
		29,500,000.00	698,544.52	108,333.32
May 1, 1931	November 1, 1970	300,000.00	15,000.00	....
....	....	119,974,469.58	4,063,056.61	1,099,813.83
November 1, 1919	November 1, 1969	1,200,000.00	....	....

In respect of the Sandwich, Windsor and Amherstburg Railway:

The Commission having—on the advice of its Solicitors—decided that the bonds of $5,816,205, issued by it between 1920 and 1926 (and guaranteed by the Province of Ontario), under the provisions of the Hydro-Electric Railway Act, in purchase of the Sandwich, Windsor and Amherstburg Railway and to make extensions and betterments thereto, ceased to be a liability of the Commission upon the passing of the Sandwich, Windsor and Amherstburg Railway Act in 1930 and upon the transfer of the Railway to the Sandwich, Windsor and Amherstburg Railway Company in 1931, such bonds have not been reflected as a liability in this Statement.

THE HYDRO-ELECTRIC POWER

Depreciation and Obsolescence

	Niagara system	Georgian Bay system
	$ c.	$ c.
Balances at November 1, 1937	27,735,199.59	2,105,444.34
Provisions in the year—direct	1,558,882.56	133,878.03
indirect	....	....
Interest at 4% on reserves' balances	1,109,407.99	84,217.77
Adjustments re transfer of equipment	23,878.52	331.76
Sub-total	30,427,368.66	2,323,871.90
Expenditures for the year	473,587.69	29,145.15
Balances at October 31, 1938	29,953,780.97	2,294,726.75
Account balances:		
Power plants, transmission lines and transformer stations	26,714,983.89	1,981,646.72
Rural power districts	3,231,900.86	312,145.23
Rural lines	6,896.22	934.80
Manitoulin rural power district	....	....
Nipissing rural power districts	....	....
Administrative office building	....	....
Service buildings and equipment	....	....
	29,953,780.97	2,294,726.75

THE HYDRO-ELECTRIC POWER

Contingencies Reserves

	Niagara system	Georgian Bay system
	$ c.	$ c.
Balances at November 1, 1937	5,047,863.88	567,477.11
Provision in the year as per cost statement	604,442.27	29,247.78
Interest at 4% on reserves' balances	201,914.55	22,699.09
Profits from sale of securities and sundry adjustments	35,783.70	784.25
Sub-total	5,890,004.40	620,208.23
Contingencies met with during year	666,237.13	40,736.80
Terminal Building—Hamilton	27,597.50	....
Balances at October 31, 1938	5,196,169.77	579,471.43
Account balances:		
Power plants, transmission lines, transformer stations and rural power districts	5,192,859.01	579,061.12
Rural lines	3,310.76	410.31
Manitoulin rural power district	....	....
Nipissing rural power districts	....	....
	5,196,169.77	579,471.43

COMMISSION OF ONTARIO

Reserves—October 31, 1938

Eastern Ontario system	Thunder Bay system	Non-system properties	Service and administrative buildings and equipment	Total for power undertakings operated on a "cost basis"
$ c.	$ c.	$ c.	$ c.	$ c.
4,588,776.53	2,227,058.46	13,877.73	521,151.98	37,191,508.63
261,820.01	159,990.02	1,524.93	....	2,116,095.55
....	....	....	12,340.51	12,340.51
181,943.99	89,082.34	555.11	17,710.42	1,482,917.62
(46,116.15)	....	....	....	(21,905.87)
4,986,424.38	2,476,130.82	15,957.77	551,202.91	40,780,956.44
79,005.73	2,164.38	14.10	5,167.03	589,084.08
4,907,418.65	2,473,966.44	15,943.67	546,035.88	40,191,872.36
4,272,392.40	2,457,861.17	....	....	35,426,884.18
635,026.25	16,105.27	....	....	4,195,177.61
....	....	....	....	7,831.02
....	....	6,828.78	....	6,828.78
....	....	9,114.89	....	9,114.89
....	....	....	172,318.17	172,318.17
....	....	....	373,717.71	373,717.71
4,907,418.65	2,473,966.44	15,943.67	546,035.88	40,191,872.36

COMMISSION OF ONTARIO

—October 31, 1938

Eastern Ontario system	Thunder Bay system	Non-system properties	Total for power undertakings operated on a "cost basis"
$ c.	$ c.	$ c.	$ c.
1,502,245.61	991,795.46	4,396.44	8,113,778.50
66,627.95	85,852.37	....	786,170.37
60,089.82	39,671.82	175.86	324,551.14
200.00	....	....	36,767.95
1,629,163.38	1,117,319.65	4,572.30	9,261,267.96
62,322.16	3,179.77	575.06	773,050.92
....	....	....	27,597.50
1,566,841.22	1,114,139.88	3,997.24	8,460,619.54
1,566,841.22	1,114,139.88	....	8,452,901.23
....	....	....	3,721.07
....	....	1,842.26	1,842.26
....	....	2,154.98	2,154.98
1,566,841.22	1,114,139.88	3,997.24	8,460,619.54

THE HYDRO-ELECTRIC POWER

Stabilization of Rates Reserves

	Niagara system
	$ c.
Balance November 1, 1937	4,379,543.58
Appropriations in the year as per cost statement	....
Interest at 4% on stabilization balances	175,181.75
Balance as at October 31, 1938	4,554,725.33
Account balances:	
Systems	4,554,725.33

THE HYDRO-ELECTRIC POWER

Sinking Fund Reserves

	Niagara system	Georgian Bay system
	$ c.	$ c.
Balance at November 1, 1937	37,435,913.74	1,474,287.32
Provision in the year—direct	2,201,335.71	99,052.44
indirect	....	....
Interest at 4% on reserves' balances	1,497,436.55	58,971.49
Total	3,698,772.26	158,023.93
Adjustment	....	(55.68)
Balances at October 31, 1938	41,134,686.00	1,632,255.57
Account balances:		
Systems	40,187,177.92	1,528,653.13
Rural power districts	932,372.57	102,297.59
Rural lines	15,135.51	1,304.85
Bonnechere River storage	....	....
Manitoulin rural power districts	....	....
Nipissing rural power districts	....	....
Administrative office buildings	....	....
Service buildings and equipment	....	....
	41,134,686.00	1,632,255.57

COMMISSION OF ONTARIO

—October 31, 1938

Georgian Bay system	Eastern Ontario system	Thunder Bay system	Total for power undertakings operated on a "cost basis"
$ c.	$ c.	$ c.	$ c.
79,548.60	240,499.00	123,423.00	4,823,014.18
86,648.10	81,494.60	....	168,142.70
3,181.94	9,619.96	4,936.92	192,920.57
169,378.64	331,613.56	128,359.92	5,184,077.45
169,378.64	331,613.56	128,359.92	5,184,077.45

COMMISSION OF ONTARIO

—October 31, 1938

Eastern Ontario system	Thunder Bay system	Non-system properties	Service and administrative buildings and equipment	Totals for power undertakings operated on a "cost basis"
$ c.	$ c.	$ c.	$ c.	$ c.
2,027,152.91	1,977,353.52	15,407.80	406,704.06	43,336,819.35
230,069.37	283,441.03	838.69	....	2,814,737.24
....	....	1,737.60	25,136.19	26,873.79
81,086.12	79,094.14	616.31	16,268.16	1,733,472.77
311,155.49	362,535.17	3,192.60	41,404.35	4,575,083.80
....	....	....	....	(55.68)
2,338,308.40	2,339,888.69	18,600.40	448,108.41	47,911,847.47
2,143,313.18	2,335,550.40	....	....	46,194,694.63
194,995.22	4,338.29	....	....	1,234,003.67
....	....	....	....	16,440.36
....	....	13,717.74	....	13,717.74
....	....	2,449.09	....	2,449.09
....	....	2,433.57	....	2,433.57
....	....	....	270,804.34	270,804.34
....	....	....	177,304.07	177,304.07
2,338,308.40	2,339,888.69	18,600.40	448,108.41	47,911,847.47

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

Account with
The Provincial Treasurer of the Province of Ontario
As at October 31, 1938

ADVANCES FROM THE PROVINCE OF ONTARIO

	Total	Northern Ontario Properties operated for the Province of Ontario	Niagara and other systems operated on a "cost basis"
	$ c.	$ c.	$ c.
ADVANCES FOR CAPITAL EXPENDITURES:			
Cash advances made by the Province to the Commission for capital expenditures purposes during the years 1909 to 1934 inclusive.............	207,250,258.34	8,272,889.39	198,977,368.95
Cash returned by the Commission to the Province on April 30, 1935, to cover the difference between advances made by the Province to the Commission during the year ended October 31, 1934, and the capital expenditures made out of such advances by the Commission in that year........	247,507.98	74,001.99	173,505.99
Total advances for capital expenditures......	207,002,750.36	8,198,887.40	198,803,862.96
REPAYMENTS OF ADVANCES—1926-33:			
Cash repayments made by the Commission to the Province during the years 1926 to 1933 inclusive, which have been applied in each subsequent year to reduce the Commission's share in maturing Provincial obligations......................	17,008,616.73	....	17,008,616.73
Commission's Share in Provincial Bonds at October 31, 1934......................	189,994,133.63	8,198,887.40	181,795,246.23
REPAYMENTS OF ADVANCES:			
Retirements of Commission's share of Provincial bonds matured in the period November 1, 1934, to October 31, 1938—			
In year ended Oct. 31, 1935 $ 3,946,628.69			
" " " " 1936 21,998,092.45			
" " " " 1937 13,557,615.63			
" " " " 1938 1,777,019.93	41,279,356.70	1,828,250.15	39,451,106.55
Commission's share in Provincial bonds at October 31, 1938......................	148,714,776.93	6,370,637.25	142,344,139.68

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

STATEMENTS FOR MUNICIPALITIES

RECEIVING POWER UNDER COST CONTRACTS

For the Year ended October 31, 1938

STATEMENTS FOR EACH SYSTEM

Cost of Power	Credit or Charge
Sinking Fund	Rural Operating

NIAGARA

**Statement showing the amount chargeable (upon annual adjustment) to each
it by the Commission; the amount received by the Commission
or charged to each Municipality in respect of power**

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating		
	To October 31, 1938			Cost of power purchased	Operation, maintenance and administrative expenses	Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Acton	27.50	194,247.43	771.8	4,516.38	4,072.77	8,846.04
Agincourt	35.50	48,792.15	166.6	974.90	1,181.61	2,222.94
Ailsa Craig	46.50	35,430.77	104.1	609.17	1,124.19	1,607.85
Alvinston	70.50	43,219.06	85.4	499.74	1,903.16	1,967.87
Amherstburg	33.50	204,066.63	744.6	4,357.21	4,649.93	8,960.75
Ancaster twp	27.50	70,538.80	319.4	1,869.05	2,106.05	3,204.07
Arkona	67.50	26,308.49	52.1	304.88	935.42	1,181.73
Aylmer	30.50	161,054.21	654.6	3,830.56	3,625.77	7,103.54
Ayr	29.50	45,699.92	187.5	1,097.20	1,058.92	2,082.04
Baden	28.50	76,071.84	324.9	1,901.23	1,836.69	3,465.22
Beachville	28.50	109,252.50	469.6	2,747.98	2,586.73	4,985.40
Beamsville	26.00	89,871.02	429.5	2,513.33	2,044.81	4,084.80
Belle River	35.50	41,205.64	155.5	909.95	1,096.67	1,877.07
Blenheim	34.50	112,004.97	437.8	2,561.90	4,107.53	5,112.50
Blyth	49.50	37,036.79	103.6	606.24	1,185.63	1,691.73
Bolton	38.50	43,496.42	149.2	873.08	1,207.25	1,968.23
Bothwell	42.50	33,366.43	118.5	693.43	1,579.33	1,523.18
Brampton	27.00	556,855.78	2,690.2	15,742.38	15,394.56	25,379.03
Brantford	22.50	3,050,026.41	14,802.4	86,619.95	56,259.10	139,014.02
Brantford twp	27.50	139,548.07	684.1	4,003.18	4,801.36	6,359.10
Bridgeport	31.50	30,322.31	115.4	675.29	824.11	1,363.04
Brigden	60.50	32,678.42	74.4	435.37	1,028.20	1,487.83
Brussels	45.50	45,693.97	133.4	780.62	1,476.15	2,087.49
Burford	30.50	43,493.72	180.0	1,053.32	1,020.29	1,981.56
Burgessville	50.50	13,873.04	39.1	228.80	617.20	631.31
Caledonia	27.50	71,020.82	320.9	1,877.83	1,580.90	3,233.91
Campbellville	55.50	12,242.44	31.7	185.50	489.49	557.55
Cayuga	43.50	41,091.76	121.5	710.99	1,085.61	1,864.65
Chatham	26.50	1,175,865.17	5,375.7	31,457.26	25,244.63	53,604.27
Chippawa	21.50	48,419.83	285.0	1,667.75	1,165.27	2,206.50
Clifford	51.50	31,065.67	77.4	452.93	996.64	1,414.29
Clinton	33.50	134,099.51	504.5	2,952.21	4,554.92	6,139.82
Comber	41.50	41,777.06	126.4	739.66	1,296.73	1,900.14
Cottam	40.50	20,005.43	66.8	390.90	737.63	911.21
Courtright	65.50	19,739.49	41.3	241.68	774.82	899.33

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1938

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Amounts charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Provision for depreciation and obsolescence	Provision for contingencies	Provision for sinking fund				Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,708.28	640.76	2,046.96	41.02	21,872.21	21,223.54	....	648.67
436.93	143.69	514.38	8.85	5,483.30	5,912.46	429.16	....
366.07	110.96	372.05	5.53	4,195.82	4,839.44	643.62	....
510.32	132.46	455.36	4.54	5,473.45	6,020.66	547.21	....
1,731.21	651.16	2,073.50	39.57	22,463.33	24,942.67	2,479.34	....
559.36	222.10	741.42	16.97	8,719.02	8,784.38	65.36	....
305.13	81.72	273.45	2.77	3,085.10	3,513.91	428.81	....
1,310.73	498.79	1,643.75	34.79	18,047.93	19,965.00	1,917.07	....
392.46	150.05	481.78	9.96	5,272.41	5,531.44	259.03	....
631.54	247.54	801.85	17.27	8,901.34	9,259.35	358.01	....
905.63	368.58	1,153.61	24.96	12,772.89	13,384.82	611.93	....
700.83	299.73	945.21	22.82	10,611.53	11,471.94	860.41	....
363.43	136.50	434.35	8.26	4,826.23	5,521.08	694.85	....
980.75	370.42	1,183.02	23.27	14,339.39	15,103.28	763.89	....
392.95	117.46	391.46	5.51	4,390.98	5,127.74	736.76	....
410.98	132.49	455.45	7.93	5,055.41	5,744.80	689.39	....
311.40	111.14	352.46	6.30	4,577.24	5,035.15	457.91	....
4,124.57	1,682.17	5,872.66	142.97	68,338.34	72,635.61	4,297.27	....
23,151.02	9,805.17	32,167.58	619.46	347,636.30	339,786.64	....	7,849.66
1,024.06	438.20	1,471.48	36.36	18,133.74	18,812.70	678.96	....
267.90	96.43	315.40	6.13	3,548.30	3,633.98	85.68	....
369.91	105.93	344.28	3.95	3,775.47	4,502.16	726.69	....
476.03	146.56	483.04	7.09	5,456.98	6,069.67	612.69	....
371.09	143.82	458.53	9.57	5,038.18	5,489.45	451.27	....
146.67	43.26	146.08	2.08	1,815.40	1,972.39	156.99	....
566.86	227.84	748.32	17.05	8,252.71	8,823.91	571.20	....
133.81	36.63	129.02	1.68	1,533.68	1,756.98	223.30	....
425.67	124.79	431.48	6.46	4,649.65	5,285.19	635.54	....
9,019.37	3,796.08	12,403.93	285.68	135,811.22	142,455.12	6,643.90	....
298.91	139.76	510.58	15.15	6,003.92	6,128.34	124.42	....
343.14	97.15	327.26	4.11	3,635.52	3,983.46	347.94	....
1,221.86	419.26	1,420.74	26.81	16,735.62	16,407.39	....	328.23
422.95	132.56	439.69	6.72	4,938.45	5,246.92	308.47	....
190.68	65.67	210.85	3.55	2,510.49	2,704.01	193.52	....
229.54	59.69	208.10	2.19	2,415.35	2,707.29	291.94	....

NIAGARA

Statement showing the amount chargeable (upon annual adjustment) to each it by the Commission; the amount received by the Commission or charged to each Municipality in respect of power

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating		
	To October 31, 1938			Cost of power purchased	Operation, maintenance and administrative expenses	Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Dashwood	45.50	23,187.63	70.4	411.96	603.02	1,053.66
Delaware	36.50	14,387.45	59.6	348.76	475.77	653.44
Delhi	36.00	52,155.02	144.1	843.24	1,363.08	1,876.75
Dorchester	37.50	26,593.48	96.6	565.28	762.13	1,208.07
Drayton	51.50	45,543.04	111.2	650.71	1,295.11	2,073.37
Dresden	39.50	100,431.38	347.5	2,033.48	2,771.70	4,567.67
Drumbo	36.50	21,261.56	81.2	475.16	649.24	968.57
Dublin	55.00	12,760.98	35.4	207.15	416.26	578.14
Dundas	22.50	356,920.30	1,833.5	10,729.18	5,929.47	16,208.29
Dunnville	27.50	218,084.24	1,006.0	5,886.86	4,131.65	9,969.79
Dutton	33.50	55,773.67	227.2	1,329.52	1,757.20	2,540.63
Elmira	31.50	175,973.84	700.0	4,096.23	3,069.67	8,016.46
Elora	31.50	84,623.37	326.0	1,907.67	2,064.50	3,854.10
Embro	42.50	32,543.12	114.8	671.78	1,093.79	1,487.45
Erieau	49.50	28,230.59	81.1	474.58	1,079.46	1,287.55
Erie Beach	60.50	8,777.29	23.6	138.10	406.93	400.25
Essex	31.50	120,422.50	465.9	2,726.33	2,815.59	5,485.80
Etobicoke twp	23.50	1,078,876.09	5,198.2	30,418.57	19,977.00	48,836.31
Exeter	34.50	128,063.50	468.8	2,743.30	3,428.52	5,817.57
Fergus	31.50	284,564.89	1,136.7	6,651.68	6,053.65	12,966.13
Fonthill	29.50	25,730.24	123.7	723.86	1,132.44	1,171.65
Forest	41.50	135,310.30	425.9	2,492.26	3,952.29	6,031.10
Forest Hill Village	26.34	1,090,272.61	5,096.8	29,825.20	25,153.72	49,706.65
Galt	22.50	1,442,028.29	7,009.6	41,018.43	29,632.75	65,137.57
Georgetown	31.50	343,706.59	1,284.6	7,517.16	8,178.87	15,622.51
Glencoe	51.50	70,570.83	189.1	1,106.57	2,647.81	3,219.05
Goderich	38.50	349,368.62	1,158.0	6,776.33	9,941.29	15,964.52
Granton	48.50	22,709.58	66.2	387.39	701.21	1,001.20
Guelph	23.50	1,871,178.50	9,255.2	54,159.12	37,150.26	85,264.72
Hagersville	28.50	141,925.56	552.7	3,234.26	2,633.29	6,431.26
Hamilton	20.00	18,866,052.78	101,780.3	595,592.95	301,707.46	857,515.74
Harriston	38.50	101,417.18	344.5	2,015.93	2,742.70	4,617.84
Harrow	34.50	112,176.85	396.7	2,321.39	2,496.55	4,979.28
Hensall	45.50	59,380.59	163.6	957.35	1,585.31	2,698.66
Hespeler	24.50	368,948.29	1,804.7	10,560.65	7,837.91	16,765.97

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1938

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Amounts charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Provision for depreciation and obsolescence	Provision for contingencies	Provision for sinking fund				Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
236.46	71.65	243.81	3.74	2,624.30	3,202.00	577.70	....
121.53	47.17	151.20	3.17	1,801.04	2,176.88	375.84	....
392.80	130.25	434.28	7.66	5,048.06	5,187.60	139.54	....
246.10	85.30	279.55	5.13	3,151.56	3,621.22	469.66	....
506.67	138.99	479.77	5.91	5,150.53	5,724.61	574.08	....
946.47	326.97	1,056.95	18.47	11,721.71	13,724.88	2,003.17	....
192.01	68.21	224.13	4.32	2,581.64	2,962.86	381.22	....
134.29	44.71	133.78	1.88	1,516.21	1,945.12	428.91	....
2,490.90	1,088.44	3,750.57	97.44	40,294.29	41,254.59	960.30	....
1,768.96	743.86	2,306.99	53.46	24,861.57	27,664.26	2,802.69	....
479.70	178.40	587.90	12.07	6,885.42	7,610.31	724.89	....
1,542.16	577.40	1,855.00	37.20	19,194.12	22,050.23	2,856.11	....
760.34	276.66	891.83	17.32	9,772.42	10,268.16	495.74	....
309.97	104.96	344.19	6.10	4,018.24	4,877.89	859.65	....
293.91	88.70	297.94	4.31	3,526.45	4,013.17	486.72	....
93.96	27.67	92.62	1.25	1,160.78	1,428.28	267.50	....
1,043.34	400.41	1,269.40	24.76	13,765.63	14,674.53	908.90	....
7,812.74	3,367.14	11,300.64	276.25	121,988.65	122,156.47	167.82	....
1,179.41	406.37	1,346.17	24.91	14,946.25	16,173.27	1,227.02	....
2,495.43	918.95	3,000.34	60.41	32,146.59	35,804.43	3,657.84	....
199.94	76.56	271.12	6.57	3,582.14	3,647.61	65.47	....
1,298.08	442.90	1,395.59	22.63	15,634.85	17,672.72	2,037.87	....
7,335.02	3,147.41	11,502.03	270.86	126,940.89	134,249.69	7,308.80	....
10,478.46	4,489.40	15,072.72	372.51	166,201.84	157,716.52	....	8,485.32
3,139.64	1,097.76	3,615.02	68.27	39,239.23	40,463.62	1,224.39	....
756.81	223.24	744.88	10.05	8,708.41	9,739.03	1,030.62	....
3,421.50	1,062.30	3,694.16	61.54	40,921.64	43,286.39	2,364.75	....
225.78	68.17	231.68	3.52	2,618.95	3,208.64	589.69	....
13,624.31	5,962.92	19,730.11	491.85	216,383.29	217,497.84	1,114.55	....
1,260.25	455.14	1,488.18	29.37	15,531.75	15,751.84	220.09	....
124,551.55	57,150.20	198,427.56	5,408.93	2,140,354.39	2,035,606.41	....	104,747.98
974.53	329.59	1,068.56	18.31	11,767.46	13,263.22	1,495.76	....
989.99	364.07	1,152.20	21.08	12,324.56	13,686.69	1,362.13	....
631.94	180.47	624.46	8.69	6,686.88	7,444.89	758.01	....
2,696.34	1,155.61	3,879.61	95.91	42,992.00	44,214.11	1,222.11	....

NIAGARA

**Statement showing the amount chargeable (upon annual adjustment) to each
it by the Commission; the amount received by the Commission
or charged to each Municipality in respect of power**

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Share of operating		
	To October 31, 1938			Cost of power purchased	Operation, maintenance and administrative expenses	Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Highgate	42.50	23,228.96	73.6	430.69	893.93	1,059.03
Humberstone	24.50	89,221.53	418.7	2,450.13	1,709.34	4,064.26
Ingersoll	24.50	483,450.67	2,246.0	13,143.03	10,211.60	22,030.51
Jarvis	35.50	52,784.42	167.3	979.00	1,178.85	2,393.75
Kingsville	34.50	143,179.12	530.3	3,103.18	3,240.14	6,594.49
Kitchener	22.50	3,984,703.47	19,781.1	115,754.08	73,560.67	181,471.31
Lambeth	37.50	31,304.89	113.5	664.17	987.97	1,422.11
LaSalle	32.50	57,824.60	221.0	1,293.24	1,618.57	2,634.16
Leamington	33.50	431,700.78	1,596.7	9,343.49	8,327.80	19,665.02
Listowel	32.50	257,915.68	1,033.2	6,046.03	6,624.18	11,742.37
London	22.50	6,779,039.20	33,840.5	198,026.20	120,278.40	307,765.74
London twp.	29.50	109,222.12	471.5	2,759.10	2,595.08	4,960.11
Long Branch	25.50	179,672.46	820.6	4,801.95	3,579.74	8,136.73
Lucan	33.50	48,892.90	199.1	1,165.08	1,568.50	2,220.63
Lynden	33.50	21,812.30	86.0	503.25	617.87	991.01
Markham	32.50	80,646.68	312.9	1,831.01	2,266.66	3,672.12
Merlin	41.50	21,764.10	71.2	416.64	800.70	991.44
Merritton	19.50	986,813.59	5,599.8	32,768.63	16,626.48	44,935.05
Milton	30.50	202,217.36	879.4	5,146.03	6,531.93	9,214.79
Milverton	31.50	76,182.39	298.6	1,747.33	1,827.52	3,468.38
Mimico	21.50	444,202.29	2,247.5	13,151.81	8,521.39	20,105.84
Mitchell	29.50	123,366.50	524.5	3,069.24	3,349.31	5,619.58
Moorefield	60.50	14,672.36	31.1	181.99	430.37	672.78
Mount Brydges	37.50	26,064.09	97.7	571.72	995.18	1,183.96
Newbury	49.50	11,424.65	32.6	190.77	474.89	521.22
New Hamburg	30.50	121,175.54	487.1	2,850.39	2,400.51	5,519.47
New Toronto	25.50	1,445,221.68	6,534.2	38,236.50	28,332.02	65,452.16
Niagara Falls	17.00	1,411,790.92	9,255.8	54,162.62	24,381.16	64,454.10
Niagara-on-the-Lake	22.50	94,179.36	541.9	3,171.06	2,367.72	4,301.40
Norwich	30.50	85,549.56	355.8	2,082.05	2,377.75	3,893.06
Oil Springs	39.50	60,597.54	201.3	1,177.96	1,889.48	2,736.36
Otterville	40.50	29,755.67	99.7	583.42	873.07	1,354.09
Palmerston	35.50	116,761.45	434.3	2,541.42	3,303.60	5,316.82
Paris	23.50	264,301.48	1,293.1	7,566.90	5,498.00	12,044.01
Parkhill	55.50	65,957.26	148.3	867.81	1,569.70	2,995.84

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1938

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Amounts charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Provision for depreciation and obsolescence	Provision for contingencies	Provision for sinking fund				Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
230.65	74.12	245.06	3.91	2,937.39	3,126.89	189.50	....
699.64	294.55	940.46	22.25	10,180.63	10,256.88	76.25	....
3,733.59	1,538.63	5,097.82	119.36	55,874.54	55,026.66	....	847.88
528.82	165.23	553.91	8.89	5,808.45	5,938.50	130.05	....
1,303.06	484.94	1,525.95	28.18	16,279.94	18,294.75	2,014.81	....
28,725.27	12,618.89	41,992.14	1,051.23	455,173.59	445,075.52	....	10,098.07
290.05	99.33	329.07	6.03	3,798.73	4,254.35	455.62	....
505.45	193.65	609.54	11.74	6,866.35	7,182.18	315.83	....
3,860.62	1,391.39	4,550.45	84.85	47,223.62	53,488.40	6,264.78	....
2,228.15	845.74	2,717.16	54.91	30,258.54	33,577.58	3,319.04	....
48,159.73	21,261.48	71,216.43	1,798.39	768,506.37	761,410.23	....	7,096.14
892.53	350.06	1,147.76	25.06	12,729.70	13,909.21	1,179.51	....
1,374.19	569.14	1,882.82	43.61	20,388.18	20,924.84	536.66	....
418.46	157.94	513.85	10.58	6,055.04	6,668.42	613.38	....
192.90	67.75	229.32	4.57	2,606.67	2,880.79	274.12	....
654.86	251.99	849.72	16.63	9,542.99	10,169.44	626.45	....
212.24	71.82	229.42	3.78	2,726.04	2,956.02	229.98	....
6,256.17	2,840.53	10,397.89	297.61	114,122.36	109,196.75	....	4,925.61
1,651.08	604.60	2,132.29	46.73	25,327.45	26,822.42	1,494.97	....
668.59	255.68	802.58	15.87	8,785.95	9,407.07	621.12	....
3,045.30	1,335.04	4,652.45	119.44	50,931.27	48,321.21	....	2,610.06
1,018.58	393.60	1,300.36	27.87	14,778.54	15,473.22	694.68	....
172.33	45.60	155.68	1.65	1,660.40	1,878.97	218.57	....
236.42	85.03	273.97	5.19	3,351.47	3,664.02	312.55	....
119.35	39.02	120.61	1.73	1,467.59	1,613.64	146.05	....
1,053.72	390.82	1,277.20	25.89	13,518.00	14,857.67	1,339.67	....
11,160.43	4,655.29	15,145.51	347.25	163,329.16	166,623.11	3,293.95	....
7,332.34	3,796.40	14,914.56	491.92	169,533.10	157,348.97	....	12,184.13
603.27	252.33	995.34	28.81	11,719.93	12,191.57	471.64	....
724.33	279.17	900.85	18.91	10,276.12	10,852.11	575.99	....
575.88	205.99	633.19	10.70	7,229.56	7,949.47	719.91	....
289.72	94.94	313.33	5.30	3,513.87	4,036.46	522.59	....
1,062.17	382.40	1,230.30	23.08	13,859.79	15,418.13	1,558.34	....
1,943.57	829.14	2,786.96	68.72	30,737.30	30,386.74	....	350.56
753.98	196.82	693.23	7.88	7,085.26	8,228.28	1,143.02	....

NIAGARA

Statement showing the amount chargeable (upon annual adjustment) to each it by the Commission; the amount received by the Commission or charged to each Municipality in respect of power

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Share of operating		
	To October 31, 1938			Cost of power purchased	Operation, maintenance and administrative expenses	Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Petrolia	35.50	279,936.66	1,009.8	5,909.10	8,217.76	12,658.84
Plattsville	45.50	25,879.27	76.2	445.90	745.66	1,178.63
Point Edward	33.50	267,061.46	1,112.1	6,507.73	9,810.45	12,164.40
Port Colborne	24.50	356,864.83	1,674.7	9,799.93	6,347.97	16,256.08
Port Credit	29.50	152,520.94	684.0	4,002.60	4,331.43	6,950.46
Port Dalhousie	25.50	153,139.12	724.5	4,239.59	3,213.62	6,972.51
Port Dover	33.50	93,182.07	351.5	2,056.89	1,914.93	4,245.32
Port Rowan	50.50	22,992.54	73.1	427.76	616.58	1,060.59
Port Stanley	34.50	127,101.97	445.1	2,604.61	3,023.24	5,571.31
Preston	22.50	587,356.88	2,935.8	17,179.57	12,447.82	26,714.41
Princeton	40.50	36,677.79	123.2	720.94	1,255.18	1,670.65
Queenston	24.50	21,461.14	111.6	653.06	453.98	984.69
Richmond Hill	30.50	93,458.73	388.5	2,273.41	2,496.78	4,258.99
Ridgetown	33.50	129,431.87	500.6	2,929.39	4,418.67	5,903.26
Riverside	29.50	239,108.66	923.7	5,405.26	4,766.53	11,019.22
Rockwood	35.50	31,656.51	110.0	643.69	767.99	1,432.91
Rodney	45.00	46,646.27	138.2	808.71	1,533.13	2,122.73
St. Catharines	18.50	2,458,683.81	13,889.0	81,274.96	40,729.09	111,957.09
St. Clair Beach	35.50	21,824.18	74.9	438.30	662.39	1,004.03
St. George	35.50	39,408.75	150.1	878.35	1,197.90	1,795.26
St. Jacobs	29.50	65,950.26	283.5	1,658.97	1,466.66	3,003.18
St. Marys	31.50	308,494.70	1,321.4	7,732.50	9,561.20	14,041.19
St. Thomas	23.50	1,446,543.91	7,254.7	42,452.69	29,413.45	65,909.02
Sarnia	28.50	1,910,684.07	7,856.0	45,971.35	41,057.89	87,028.87
Scarboro twp.	27.50	803,828.78	3,380.2	19,780.09	13,577.24	36,631.27
Seaforth	30.50	120,442.79	483.7	2,830.49	3,636.69	5,500.52
Simcoe	25.50	412,242.19	1,934.5	11,320.21	8,521.20	18,786.14
Springfield	43.50	24,333.03	64.4	376.85	722.30	1,042.92
Stamford twp.	17.50	333,877.46	2,168.6	12,690.11	5,750.08	15,238.82
Stouffville	40.50	70,090.50	227.9	1,333.61	2,192.20	3,147.56
Stratford	25.50	1,478,600.85	6,936.8	40,592.42	33,185.98	67,300.11
Strathroy	29.50	264,750.11	1,110.7	6,499.54	5,232.47	12,023.78
Streetsville	35.50	25,696.19	108.2	633.16	896.60	1,170.90
Sutton	47.50	79,110.62	242.1	1,416.71	2,409.25	3,604.70
Swansea	29.00	504,089.68	2,432.3	14,233.21	16,730.68	22,977.04
Tavistock	31.50	137,736.02	560.8	3,281.66	3,523.13	6,269.00
Tecumseh	32.50	87,156.17	314.0	1,837.45	2,197.60	4,013.17
Thamesford	35.50	47,960.27	181.5	1,062.09	1,288.22	2,179.03
Thamesville	35.50	52,703.13	199.9	1,169.76	2,053.28	2,291.01
Thedford	62.50	35,987.52	82.7	483.94	1,209.84	1,613.12

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1938

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Amounts charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Provision for depreciation and obsolescence	Provision for contingencies	Provision for sinking fund				Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,536.87	937.94	2,929.23	53.67	33,243.41	36,498.24	3,254.83	....
269.10	80.85	272.73	4.05	2,996.92	3,466.30	469.38	....
2,208.18	887.49	2,814.82	59.10	34,452.17	37,256.31	2,804.14	....
2,798.40	1,178.17	3,761.63	89.00	40,231.18	41,031.00	799.82	....
1,212.75	491.01	1,608.32	36.35	18,632.92	20,178.69	1,545.77	....
1,191.41	469.00	1,613.43	38.50	17,738.06	18,475.14	737.08	....
848.53	294.52	982.36	18.68	10,361.23	11,773.83	1,412.60	....
235.05	72.19	245.42	3.88	2,661.47	3,689.38	1,027.91	....
1,135.56	394.98	1,289.19	23.65	14,042.54	15,355.92	1,313.38	....
4,201.79	1,849.13	6,181.67	156.02	68,730.41	66,056.20	....	2,674.21
357.63	116.69	386.58	6.55	4,514.22	4,989.22	475.00	....
156.82	64.09	227.86	5.93	2,546.43	2,734.96	188.53	....
714.08	291.45	985.52	20.65	11,040.88	11,848.70	807.82	....
1,140.36	428.02	1,366.00	26.60	16,212.30	16,770.05	557.75	....
2,115.68	825.47	2,549.83	49.09	26,731.08	27,248.36	517.28	....
300.20	103.88	331.57	5.85	3,586.09	3,903.17	317.08	....
482.09	145.19	491.20	7.34	5,590.39	6,219.72	629.33	....
15,683.81	7,089.70	25,906.66	738.13	283,379.44	256,946.16	....	26,433.28
207.98	74.11	232.33	3.98	2,623.12	2,660.57	37.45	....
356.53	123.89	415.42	7.98	4,775.33	5,329.10	553.77	....
544.32	216.52	694.93	15.07	7,599.65	8,362.71	763.06	....
2,477.11	1,029.13	3,249.10	70.22	38,160.45	41,624.68	3,464.23	....
10,301.51	4,550.65	15,251.23	385.54	168,264.09	170,485.01	2,220.92	....
15,960.82	6,316.04	20,138.33	417.49	216,890.79	223,895.24	7,004.45	....
6,072.95	2,449.02	8,476.42	179.63	87,166.62	92,956.37	5,789.75	....
1,044.19	380.46	1,272.81	25.71	14,690.87	14,752.36	61.49	....
3,160.81	1,279.46	4,347.08	102.81	47,517.71	49,328.51	1,810.80	....
242.36	70.11	241.33	3.42	2,699.29	2,802.40	103.11	....
1,763.23	898.55	3,526.23	115.27	39,982.29	37,950.60	....	2,031.69
632.87	212.70	728.34	12.11	8,259.39	9,228.22	968.83	....
11,156.67	4,786.77	15,573.11	368.64	172,963.70	176,889.19	3,925.49	....
2,214.35	803.81	2,782.28	59.03	29,615.26	32,764.86	3,149.60	....
215.38	85.20	270.94	5.75	3,277.93	3,839.27	561.34	....
758.35	238.99	834.12	12.87	9,274.99	11,500.08	2,225.09	....
3,255.17	1,459.50	5,316.85	129.26	64,101.71	70,536.17	6,434.46	....
1,174.94	457.34	1,450.64	29.80	16,186.51	17,664.09	1,477.58	....
807.32	297.15	928.64	16.69	10,098.02	10,203.96	105.94	....
432.45	153.24	504.22	9.65	5,628.90	6,442.59	813.69	....
433.52	167.13	530.14	10.62	6,655.46	7,096.99	441.53	....
397.75	113.86	373.27	4.39	4,196.17	5,168.14	971.97	....

NIAGARA

Statement showing the amount chargeable (upon annual adjustment) to each it by the Commission; the amount received by the Commission or charged to each Municipality in respect of power

Municipality	Interim rates per horsepower collected by Commission during year To October 31, 1938	Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Share of operating: Cost of power purchased	Share of operating: Operation, maintenance and administrative expenses	Share of operating: Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Thorndale	60.50	22,170.66	63.5	371.59	696.89	1,007.54
Thorold	20.50	399,282.84	2,147.7	12,567.81	7,388.02	18,180.93
Tilbury	33.50	129,577.93	494.7	2,894.86	4,111.43	5,892.81
Tillsonburg	28.50	261,849.04	1,123.8	6,576.20	5,717.89	11,930.53
Toronto	21.60	61,709,132.41	298,671.3	1,747,749.95	953,494.05	2,812,793.81
Toronto twp.	27.50	497,831.19	2,191.9	12,826.46	12,715.55	22,626.38
Trafalgar twp. (area No. 1)	26.50	81,821.67	359.5	2,103.70	1,830.31	3,728.02
Trafalgar twp. (area No. 2)	27.50	25,925.62	109.5	640.77	638.52	1,181.17
Wallaceburg	31.50	524,820.66	2,035.5	11,911.24	11,776.25	23,919.67
Wardsville	57.50	12,133.23	33.5	196.03	515.35	553.48
Waterdown	27.50	49,170.00	221.1	1,293.82	1,043.56	2,233.45
Waterford	27.50	88,295.66	387.0	2,264.62	1,995.11	3,971.73
Waterloo	22.50	748,644.08	3,666.4	21,454.86	14,238.21	34,094.36
Watford	45.50	86,778.97	261.5	1,530.23	3,247.15	3,950.97
Welland	19.50	959,018.64	5,519.1	32,296.40	15,844.05	43,582.54
Wellesley	45.50	34,688.22	98.2	574.64	968.99	1,579.58
West Lorne	36.50	37,978.70	137.7	805.79	1,337.23	1,728.31
Weston	22.50	754,772.68	3,749.6	21,941.72	13,869.32	34,162.17
Wheatley	48.50	53,691.12	144.6	846.16	1,171.60	2,443.16
Windsor	26.00	8,214,173.33	36,965.0	216,309.98	135,068.93	374,258.89
Woodbridge	30.50	103,275.44	431.8	2,526.79	2,086.43	4,678.90
Woodstock	23.50	1,221,289.34	5,937.4	34,744.18	24,228.09	55,651.26
Wyoming	47.50	25,554.42	68.5	400.84	902.89	1,135.69
York, East, twp.	27.50	1,255,744.53	6,044.4	35,370.32	49,522.60	57,238.17
York North twp.	27.50	875,329.06	3,827.4	22,396.99	22,754.34	39,873.41
Zurich	57.50	34,470.95	82.4	482.18	1,165.38	1,567.90
Ontario Reformatory		63,651.32	296.6	1,735.63	1,349.94	2,900.13
Toronto Transportation Com.		74,854.60	367.8	2,152.27	1,355.16	3,388.64
Sandwich, Windsor & Amherstburg Rly. Co.		538,876.43	2,377.8	13,914.29	9,175.83	24,626.26
Totals—Municipalities		145,405,504.73	704,625.9	4,123,295.04	2,598,883.88	6,619,074.02
Totals—Rural power districts		9,664,425.53	39,618.3	231,836.31	230,800.44	436,270.51
Totals—Companies		43,687,773.31	239,926.7	1,403,991.26	894,409.45	1,991,289.80
Totals—Local distribution systems		1,381,172.22	4,748.8	27,788.80	73,051.41	62,188.42
		200,138,875.79				
Non-operating capital		2,040,250.26				
Grand totals		202,179,126.05	988,919.7	5,786,911.41	3,797,145.18	9,108,822.75

SYSTEM *N—COST OF POWER*

Municipality as the Cost—under Power Commission Act—of Power supplied to from each Municipality, and the amount remaining to be credited supplied to it in the year ended October 31, 1938

costs and fixed charges			Cost in excess of revenue from power sold to private companies	Amounts charged to each municipality in respect of power supplied to it in the year	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality	
Provision for depreciation and obsolescence	Provision for contingencies	Provision for sinking fund				Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
232.12	68.14	233.14	3.37	2,612.79	3,842.51	1,229.72	....
2,711.57	1,195.62	4,207.03	114.16	46,365.14	44,028.80	....	2,336.34
1,146.41	426.54	1,363.59	26.29	15,861.93	16,570.91	708.98	....
2,167.24	821.16	2,760.71	59.72	30,033.45	32,027.26	1,993.81	....
396,866.54	178,267.67	650,875.31	15,872.34	6,755,919.67	6,451,300 80	....	304,618.87
3,991.08	1,597.31	5,235.70	116.49	59,108.97	60,277.22	1,168.25	....
672.26	279.43	862.66	19.10	9,495.48	9,527.78	32.30	....
219.56	89.76	273.32	5.82	3,048.92	3,011.18	....	37.74
4,609.24	1,708.49	5,534.97	108.17	59,568.03	64,119.75	4,551.72	....
128.54	39.74	128.08	1.77	1,562.99	1,924.77	361.78	....
392.31	154.37	516.82	11.75	5,646.08	6,080.88	434.80	....
702.71	283.52	919.05	20.57	10,157.31	10,642.74	485.43	....
5,475.47	2,366.35	7,889.38	194.84	85,713.47	82,494.52	....	3,218.95
878.73	281.62	914.25	13.90	10,816.85	11,898.59	1,081.74	....
6,053.56	2,863.76	10,084.92	293.32	111,018.55	107,623.16	....	3,395.39
366.32	106.36	365.51	5.22	3,966.62	4,468.42	501.80	....
352.86	121.49	399.93	7.32	4,752.93	5,025.97	273.04	....
5,284.56	2,261.44	7,905.06	199.27	85,623.54	84,365.96	....	1,257.58
567.91	166.07	565.34	7.68	5,767.92	7,014.26	1,246.34	....
62,675.85	26,535.26	86,602.81	1,964.44	903,416.16	961,090.12	57,673.96	....
854.08	332.05	1,082.69	22.95	11,583.89	13,170.60	1,586.71	....
9,017.01	3,919.70	12,877.60	315.53	140,753.37	139,529.85	....	1,223.52
263.39	80.09	262.80	3.64	3,049.34	3,252.12	202.78	....
8,135.11	3,632.46	13,244.81	321.22	167,464.69	166,220.03	....	1,244.66
6,405.70	2,692.69	9,226.63	203.40	103,553.16	105,254.38	1,701.22	....
387.07	104.08	362.81	4.38	4,073.80	4,737.94	664.14	....
491.88	202.75	671.08	15.76	7,367.17	8,007.29	640.12	....
530.78	224.67	784.12	19.55	8,455.19	10,770.13	2,314.94	....
4,213.57	1,754.94	5,698.47	126.43	59,509.79	72,454.11	12,944.32	....
1,009,103.09	438,854.45	1,531,641.57	37,279.07	16,358,131.12	16,099,817.83	250,331.25	508,644.54
80,647.12	30,900.47	100,952.15	2,105.31	1,113,512.31	1,113,512.31	....	....
281,537.43	129,096.42	460,780.82	(32,216.50)	5,128,888.68	5,128,888.68	....	....
11,695.77	5,390.34	14,412.22	(7,167.88)	187,359.08	187,359.08	....	....
1,382,983.41	604,241.68	2,107,786.76	....	22,787,891.19	22,529,577.90	250,331.25	508,644.54

NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Acton	Jan. 1913	464.81			464.81
Agincourt	Nov. 1922	572.39			572.39
Ailsa Craig	Jan. 1916	616.74			616.74
Alvinston	April 1922	696.84			696.84
Amherstburg	Nov. 1925	3,070.07			3,070.07
Ancaster twp	May 1923	195.44			195.44
Arkona	Dec. 1926	256.98			256.98
Aylmer	Mar. 1918	1,437.03			1,437.03
Ayr	Jan. 1915	438.21			438.21
Baden	May 1912	478.50			478.50
Beachville	Aug. 1912	1,032.30			1,032.30
Beamsville	May 1937				
Belle River	Dec. 1922	614.07			614.07
Blenheim	Nov. 1915	1,380.10			1,380.10
Blyth	July 1924	652.33			652.33
Bolton	Feb. 1915	770.21			770.21
Bothwell	Sept. 1915	671.71			671.71
Brampton	Nov. 1911	6,166.09			6,166.09
Brantford	Feb. 1914		423.04	423.04	
Brantford twp	May 1924	1,031.28			1,031.28
Bridgeport	Mar. 1928	312.22			312.22
Brigden	Jan. 1918	380.21			380.21
Brussels	July 1924	723.68			723.68
Burford	June 1915	450.31			450.31
Burgessville	Nov. 1916	35.67			35.67
Caledonia	Oct. 1912	729.17			729.17
Campbellville	Jan. 1925	170.12			170.12
Cayuga	Nov. 1924	569.43			569.43
Chatham	Feb. 1915	7,692.71			7,692.71
Chippawa	Sept. 1919	422.29			422.29
Clifford	May 1924	375.16			375.16
Clinton	Mar. 1914	447.86			447.86
Comber	May 1915	680.43			680.43
Cottam	Nov. 1926	199.31			199.31
Courtright	Dec. 1923	156.71			156.71
Dashwood	Sept. 1917	532.81			532.81
Delaware	Mar. 1915	356.45			356.45
Delhi	May 1938				
Dorchester	Dec. 1914	400.52			400.52
Drayton	Mar. 1918	465.10			465.10
Dresden	April 1915	1,608.22			1,608.22
Drumbo	Dec. 1914	298.71			298.71
Dublin	Oct. 1917	94.96			94.96
Dundas	Jan. 1911	2,052.72			2,052.72
Dunnville	June 1918	2,926.33			2,926.33

SYSTEM *N.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
7.69			648.67		640.98
9.92		429.16		439.08	
10.88		643.62		654.50	
14.25		547.21		561.46	
53.78		2,479.34		2,533.12	
3.46		65.36		68.82	
4.28		428.81		433.09	
24.57		1,917.07		1,941.64	
7.58		259.03		266.61	
7.49		358.01		365.50	
20.36		611.93		632.29	
		860.41		860.41	
10.26		694.85		705.11	
22.95		763.89		786.84	
11.78		736.76		748.54	
13.57		689.39		702.96	
12.04		457.91		469.95	
85.72		4,297.27		4,382.99	
	6.35		7,849.66		7,856.01
16.50		678.96		695.46	
5.53		85.68		91.21	
6.45		726.69		733.14	
12.72		612.69		625.41	
11.24		451.27		462.51	
0.60		156.99		157.59	
13.91		571.20		585.11	
2.87		223.30		226.17	
9.60		635.54		645.14	
108.75		6,643.90		6,752.65	
11.47		124.42		135.89	
6.56		347.94		354.50	
9.18			328.23		319.05
12.02		308.47		320.49	
3.07		193.52		196.59	
2.70		291.94		294.64	
9.52		577.70		587.22	
6.47		375.84		382.31	
		139.54		139.54	
6.80		469.66		476.46	
7.81		574.08		581.89	
23.82		2,003.17		2,026.99	
4.62		381.22		385.84	
1.52		428.91		430.43	
31.72		960.30		992.02	
40.81		2,802.69		2,843.50	

NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Dutton	Sept. 1915	683.06			683.06
Elmira	Nov. 1913	2,471.78			2,471.78
Elora	Nov. 1914	573.80			573.80
Embro	Jan. 1915	832.31			832.31
Erieau	July 1924	751.19			751.19
Erie Beach	July 1925	274.99			274.99
Essex	Nov. 1923	1,202.61			1,202.61
Etobicoke twp.	Aug. 1917	3,816.08			3,816.08
Exeter	June 1916	1,184.50			1,184.50
Fergus	Nov. 1914	4,048.21			4,048.21
Fonthill	June 1926	378.72			378.72
Forest	Mar. 1917	1,432.46			1,432.46
Forest Hill Village	Jan. 1938				
Galt	May 1911		4,245.49	4,245.49	
Georgetown	Sept. 1913	3,408.48			3,408.48
Glencoe	Aug. 1920	1,621.41			1,621.41
Goderich	Feb. 1914	2,248.87			2,248.87
Granton	July 1916	461.17			461.17
Guelph	Dec. 1910	7,228.44			7,228.44
Hagersville	Sept. 1913	1,102.90			1,102.90
Hamilton	Feb. 1911		24,843.98	24,843.98	
Harriston	July 1916	866.31			866.31
Harrow	Nov. 1923	1,719.59			1,719.59
Hensall	Jan. 1917	893.56			893.56
Hespeler	Feb. 1911	2,189.73			2,189.73
Highgate	Dec. 1916	331.92			331.92
Humberstone	Oct. 1924	334.97			334.97
Ingersoll	May 1911		1,607.03	2,000.00	392.97
Jarvis	Feb. 1924	564.54			564.54
Kingsville	Nov. 1923	1,936.73			1,936.73
Kitchener	Jan. 1911	3,282.89			3,282.89
Lambeth	April 1915	410.79			410.79
LaSalle	Nov. 1925	333.85			333.85
Leamington	Nov. 1923	4,027.87			4,027.87
Listowel	June 1916	2,829.69			2,829.69
London	Jan. 1916	16,256.64			16,256.64
London twp.	Jan. 1925	1,468.03			1,468.03
Long Branch	Jan. 1931	1,047.65			1,047.65
Lucan	Feb. 1915	359.03			359.03
Lynden	Nov. 1915	405.50			405.50
Markham	April 1920	571.23			571.23
Merlin	Dec. 1922	330.15			330.15
Merritton	Nov. 1920	1,769.77			1,769.77
Milton	April 1913	2,823.82			2,823.82
Milverton	June 1916	608.47			608.47

SYSTEM *N.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
9.73		724.89		734.62	
43.44		2,856.11		2,899.55	
9.62		495.74		505.36	
13.59		859.65		873.24	
14.07		486.72		500.79	
5.81		267.50		273.31	
20.03		908.90		928.93	
63.57		167.82		231.39	
19.21		1,227.02		1,246.23	
70.55		3,657.84		3,728.39	
5.69		65.47		71.16	
22.51		2,037.87		2,060.38	
		7,308.80		7,308.80	
	71.18		8,485.32		8,556.50
57.41		1,224.39		1,281.80	
29.59		1,030.62		1,060.21	
35.98		2,364.75		2,400.73	
8.44		589.69		598.13	
120.41		1,114.55		1,234.96	
19.07		220.09		239.16	
	359.39		104,747.98		105,107.37
14.72		1,495.76		1,510.48	
29.77		1,362.13		1,391.90	
18.98		758.01		776.99	
34.56		1,222.11		1,256.67	
5.50		189.50		195.00	
5.84		76.25		82.09	
	4.96		847.88		852.84
9.67		130.05		139.72	
33.62		2,014.81		2,048.43	
76.63			10,098.07		10,021.44
7.02		455.62		462.64	
5.52		315.83		321.35	
68.40		6,264.78		6,333.18	
39.21		3,319.04		3,358.25	
269.01			7,096.14		6,827.13
20.43		1,179.51		1,199.94	
17.45		536.66		554.11	
5.63		613.38		619.01	
7.32		274.12		281.44	
9.77		626.45		636.22	
5.34		229.98		235.32	
28.32			4,925.61		4,897.29
43.03		1,494.97		1,538.00	
10.14		621.12		631.26	

NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Mimico	May 1912		470.10	470.10	
Mitchell	Sept. 1911	705.06			705.06
Moorefield	Mar. 1918	189.66			189.66
Mount Brydges	Mar. 1915	434.40			434.40
Newbury	Mar. 1921	382.05			382.05
New Hamburg	Mar. 1911	1,438.62			1,438.62
New Toronto	Feb. 1914	10,339.62			10,339.62
Niagara Falls	Dec. 1915		6,277.43	6,277.43	
Niagara-on-the-Lake	Aug. 1919		36.24	36.24	
Norwich	May 1912	770.60			770.60
Oil Springs	Feb. 1918	820.92			820.92
Otterville	Feb. 1916	443.28			443.28
Palmerston	July 1916	1,270.31			1,270.31
Paris	Feb. 1914	500.90			500.90
Parkhill	May 1920	1,047.78			1,047.78
Petrolia	May 1916	2,720.01			2,720.01
Plattsville	Dec. 1914	449.40			449.40
Point Edward	Nov. 1916	3,088.72			3,088.72
Port Colborne	Mar. 1920	1,731.99			1,731.99
Port Credit	Aug. 1912	1,806.12			1,806.12
Port Dalhousie	Nov. 1912	1,310.64			1,310.64
Port Dover	Dec. 1921	1,559.81			1,559.81
Port Rowan	Nov. 1926	936.24			936.24
Port Stanley	April 1912	1,412.11			1,412.11
Preston	Jan. 1911		1,354.18	1,354.18	
Princeton	Jan. 1915	506.22			506.22
Queenston	Mar. 1921	46.83			46.83
Richmond Hill	June 1925	714.14			714.14
Ridgetown	Dec. 1915	1,358.02			1,358.02
Riverside	Nov. 1922	593.14			593.14
Rockwood	Sept. 1913	380.03			380.03
Rodney	Feb. 1917	339.81			339.81
St. Catharines	April 1914		9,235.23	9,235.23	
St. Clair Beach	Nov. 1922	47.86			47.86
St. George	Sept. 1915	838.23			838.23
St. Jacobs	Sept. 1917	698.40			698.40
St. Marys	May 1911	4,195.74			4,195.74
St. Thomas	April 1911	5,382.94			5,382.94
Sarnia	Dec. 1916	7,100.72			7,100.72
Scarboro twp	Aug. 1918	6,594.90			6,594.90
Seaforth	Nov. 1911	286.47			286.47
Simcoe	Aug. 1915	3,007.12			3,007.12
Springfield	Aug. 1917		64.17	66.84	2.67
Stamford twp	Nov. 1916		6,627.90	3,401.38	
Stouffville	Sept. 1923	854.55			854.55

SYSTEM *N.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
	8.19		2,610.06		2,618.25
10.89		694.68		705.57	
3.21		218.57		221.78	
7.40		312.55		319.95	
7.41		146.05		153.46	
24.48		1,339.67		1,364.15	
162.03		3,293.95		3,455.98	
	98.38		12,184.13		12,282.51
	0.56	471.64		471.08	
12.67		575.99		588.66	
13.31		719.91		733.22	
7.74		522.59		530.33	
12.95		1,558.34		1,571.29	
7.63			350.56		342.93
17.81		1,143.02		1,160.83	
44.41		3,254.83		3,299.24	
8.19		469.38		477.57	
51.87		2,804.14		2,856.01	
28.66		799.82		828.48	
25.93		1,545.77		1,571.70	
18.96		737.08		756.04	
28.32		1,412.60		1,440.92	
18.27		1,027.91		1,046.18	
26.80		1,313.38		1,340.18	
	23.00		2,674.21		2,697.21
8.69		475.00		483.69	
0.76		188.53		189.29	
13.55		807.82		821.37	
21.19		557.75		578.94	
8.00		517.28		525.28	
6.52		317.08		323.60	
5.25		629.33		634.58	
	139.67		26,433.28		26,572.95
0.77		37.45		38.22	
14.49		553.77		568.26	
11.94		763.06		775.00	
72.80		3,464.23		3,537.03	
89.67		2,220.92		2,310.59	
119.06		7,004.45		7,123.51	
110.58		5,789.75		5,900.33	
4.68		61.49		66.17	
50.09		1,810.80		1,860.89	
	0.89	103.11		102.22	
	177.51		2,031.69		5,435.72
22.21		968.83		991.04	

NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Stratford	Jan. 1911	7,882.35			7,882.35
Strathroy	Dec. 1914	3,803.29			3,803.29
Streetsville	Dec. 1934	542.20			542.20
Sutton	Aug. 1923	1,663.67			1,663.67
Swansea	Oct. 1937	23.89			23.89
Tavistock	Nov. 1916	1,406.06			1,406.06
Tecumseh	Nov. 1922		216.79	216.79	
Thamesford	Feb. 1914	897.40			897.40
Thamesville	Oct. 1915	1,054.54			1,054.54
Thedford	May 1922	615.23			615.23
Thorndale	Mar. 1914	479.60			479.60
Thorold	Jan. 1921	601.09			601.09
Tilbury	April 1915	1,840.34			1,840.34
Tillsonburg	Aug. 1911	2,316.70			2,316.70
Toronto	June 1911		88,717.39	88,717.39	
Toronto twp.	Aug. 1913	1,044.28			1,044.28
Trafalgar twp. Area 1	Nov. 1937		779.83	779.83	
Trafalgar twp. Area 2	Nov. 1937		106.63	106.63	
Wallaceburg	Feb. 1915	4,712.75			4,712.75
Wardsville	June 1921	433.96			433.96
Waterdown	Nov. 1911	592.58			592.58
Waterford	April 1915	786.97			786.97
Waterloo	Dec. 1910		917.45	917.45	
Watford	Sept. 1917	1,308.11			1,308.11
Welland	Sept. 1917	4,568.39			4,568.39
Wellesley	Nov. 1916	554.45			554.45
West Lorne	Jan. 1917	88.21			88.21
Weston	Jan. 1911	1,866.17			1,866.17
Wheatley	Feb. 1924	1,079.22			1,079.22
Windsor	Oct. 1914	63,918.06			63,918.06
Woodbridge	Dec. 1914	1,677.75			1,677.75
Woodstock	Jan. 1911	2,065.27			2,065.27
Wyoming	Nov. 1916	357.38			357.38
York East twp.	July 1925	2,388.58			2,388.58
York North twp.	Nov. 1923	3,517.72			3,517.72
Zurich	Sept. 1917	740.68			740.68
Ontario Reformatory	Sept. 1913	431.36			431.36
Toronto Transportation Commission	Jan. 1927	1,877.89			1,877.89
Sandwich, Windsor & Amherstburg Railway		13,085.11		5,268.19	
Totals—Municipalities		318,234.52	145,922.88	148,360.19	305,545.05
Totals—Rural power districts		1,231,596.60	227,382.27		134.06
Grand totals		1,549,831.12	373,305.15	148,360.19	305,679.11

SYSTEM *N.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
99.34	....	3,925.49	....	4,024.83	....
67.05	....	3,149.60	....	3,216.65	....
9.74	....	561.34	....	571.08	....
32.09	....	2,225.09	....	2,257.18	....
0.38	....	6,434.46	....	6,434.84	....
31.74	....	1,477.58	....	1,509.32	....
....	3.47	105.94	....	102.47	....
16.06	....	813.69	....	829.75	....
18.12	....	441.53	....	459.65	....
10.37	....	971.97	....	982.34	....
8.66	....	1,229.72	....	1,238.38	....
10.01	....	....	2,336.34	....	2,326.33
43.72	....	708.98	....	752.70	....
37.57	....	1,993.81	....	2,031.38	....
....	1,137.52	....	304,618.87	....	305,756.39
26.32	....	1,168.25	....	1,194.57	....
....	14.53	32.30	....	17.77	....
....	1.76	....	37.74	....	39.50
77.99	....	4,551.72	....	4,629.71	....
8.41	....	361.78	....	370.19	....
10.30	....	434.80	....	445.10	....
12.42	....	485.43	....	497.85	....
....	15.18	....	3,218.95	....	3,234.13
22.08	....	1,081.74	....	1,103.82	....
76.10	....	....	3,395.39	....	3,319.29
9.98	....	501.80	....	511.78	....
1.40	....	273.04	....	274.44	....
56.24	....	....	1,257.58	....	1,201.34
16.73	....	1,246.34	....	1,263.07	....
1,071.72	....	57,673.96	....	58,745.68	....
27.95	....	1,586.71	....	1,614.66	....
32.59	....	....	1,223.52	....	1,190.93
5.99	....	202.78	....	208.77	....
40.57	....	....	1,244.66	....	1,204.09
46.65	....	1,701.22	....	1,747.87	....
10.64	....	664.14	....	674.78	....
7.09	....	640.12	....	647.21	....
32.65	....	2,314.94	....	2,347.59	....
523.40	....	12,944.32	....	31,821.02	....
5,622.70	2,062.54	250,331.25	508,644.54	273,673.83	513,300.18
49,260.17	9,095.29	147,220.34	60,634.95	1,418,017.63	287,187.09
54,882.87	11,157.83	397,551.59	569,279.49	1,691,691.46	800,487.27

NIAGARA SYSTEM *SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with the proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1938

Municipality	Period of years ending Oct. 31, 1938	Amount	Municipality	Period of years ending Oct. 31, 1938	Amount
		$ c.			$ c.
Acton	21 years	59,932.14	Dutton	18 years	17,521.85
Agincourt	14 “	9,553.28	Elmira	20 “	69,381.64
Ailsa Craig	18 “	13,887.33	Elora	19 “	33,275.96
Alvinston	15 “	13,876.34	Embro	19 “	10,090.36
Amherstburg	21 “	46,386.99	Erieau	15 “	5,499.34
Ancaster twp	15 “	14,586.78	Erie Beach	14 “	1,381.67
Arkona	12 “	5,376.07	Essex	15 “	27,020.54
Aylmer	15 “	37,448.90	Etobicoke twp	16 “	179,186.29
Ayr	19 “	13,127.01	Exeter	17 “	36,836.74
Baden	21 “	28,770.11	Fergus	19 “	53,126.89
Beachville	21 “	36,505.85	Fonthill	13 “	5,347.28
Beamsville	2 “	1,849.12	Forest	16 “	28,540.71
Belle River	16 “	8,974.71	Forest Hill Village	15 “	127,029.50
Blenheim	18 “	33,233.36	Galt	22 “	480,343.84
Blyth	15 “	8,490.56	Georgetown	20 “	90,031.63
Bolton	18 “	15,723.50	Glencoe	15 “	17,890.26
Bothwell	18 “	15,802.46	Goderich	19 “	109,094.80
Brampton	22 “	150,875.39	Granton	17 “	7,260.84
Brantford	19 “	792,512.19	Guelph	22 “	585,490.75
Brantford twp	14 “	28,937.27	Hagersville	20 “	68,638.69
Bridgeport	11 “	5,314.14	Hamilton	22 “	4,052,095.80
Brigden	16 “	10,684.95	Harriston	17 “	29,866.18
Brussels	15 “	11,522.89	Harrow	15 “	21,079.36
Burford	18 “	12,104.92	Hensall	17 “	14,381.26
Burgessville	17 “	4,763.90	Hespeler	22 “	98,306.27
Caledonia	21 “	19,878.60	Highgate	17 “	8,733.74
Campbellville	14 “	2,197.15	Humberstone	15 “	17,992.32
Cayuga	14 “	8,353.35	Ingersoll	22 “	163,054.47
Chatham	18 “	349,147.70	Jarvis	15 “	13,148.41
Chippawa	16 “	15,315.84	Kingsville	15 “	35,250.80
Clifford	15 “	6,062.55	Kitchener	22 “	1,136,054.14
Clinton	19 “	41,387.80	Lambeth	18 “	8,554.77
Comber	18 “	16,868.55	LaSalle	13 “	12,183.04
Cottam	12 “	3,684.52	Leamington	15 “	72,830.19
Courtright	15 “	5,029.25	Listowel	17 “	67,333.92
Dashwood	16 “	7,506.54	London	22 “	2,160,457.00
Delaware	18 “	2,770.18	London twp	14 “	16,831.62
Delhi	1 “	527.11	Long Branch	8 “	20,021.81
Dorchester	19 “	6,625.69	Lucan	18 “	16,505.43
Drayton	15 “	11,032.05	Lynden	18 “	11,944.62
Dresden	18 “	28,133.99	Markham	15 “	16,298.90
Drumbo	19 “	5,761.73	Merlin	15 “	10,533.16
Dublin	16 “	5,098.98	Merritton	17 “	121,200.80
Dundas	22 “	124,619.32	Milton	20 “	89,854.18
Dunnville	15 “	54,382.03	Milverton	17 “	38,677.60

NIAGARA SYSTEM *SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with the proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1938

Municipality	Period of years ending Oct. 31, 1938	Amount
		$ c.
Mimico	21 years	123,378.37
Mitchell	22 "	38,871.03
Moorefield	15 "	5,530.21
Mount Brydges	18 "	6,662.49
Newbury	15 "	4,025.16
New Hamburg	22 "	43,553.89
New Toronto	19 "	383,182.07
Niagara Falls	18 "	505,944.49
Niagara-on-the-Lake	15 "	27,137.36
Norwich	21 "	32,279.19
Oil Springs	15 "	22,067.63
Otterville	17 "	7,578.75
Palmerston	17 "	37,519.01
Paris	19 "	98,616.97
Parkhill	15 "	16,481.83
Petrolia	17 "	89,435.96
Plattsville	19 "	7,876.11
Point Edward	16 "	49,249.89
Port Colborne	17 "	83,172.43
Port Credit	21 "	34,402.54
Port Dalhousie	17 "	30,256.29
Port Dover	15 "	21,890.84
Port Rowan	12 "	5,780.58
Port Stanley	21 "	35,008.12
Preston	22 "	229,099.17
Princeton	19 "	7,968.25
Queenston	15 "	5,970.31
Richmond Hill	14 "	16,280.97
Ridgetown	18 "	36,765.88
Riverside	16 "	71,118.28
Rockwood	20 "	9,866.79
Rodney	16 "	11,499.31
St. Catharines	17 "	498,408.23
St. Clair Beach	16 "	5,814.44
St. George	18 "	12,302.27
St. Jacobs	16 "	13,685.21
St. Marys	22 "	116,825.42
St. Thomas	22 "	426,453.41
Sarnia	17 "	536,266.17
Scarboro twp	15 "	156,777.70
Seaforth	22 "	54,433.26
Simcoe	18 "	88,489.70
Springfield	16 "	8,164.02
Stamford twp	17 "	83,563.62
Stouffville	15 "	14,017.09
		$ c.
Stratford	22 years	525,264.74
Strathroy	19 "	76,001.55
Streetsville	4 "	1,488.75
Sutton	15 "	13,649.67
Swansea	13 "	60,734.07
Tavistock	17 "	39,045.42
Tecumseh	16 "	22,225.61
Thamesford	19 "	14,727.30
Thamesville	18 "	15,086.00
Thedford	15 "	8,154.15
Thorndale	19 "	7,512.59
Thorold	16 "	84,627.36
Tilbury	18 "	39,953.95
Tillsonburg	22 "	75,354.93
Toronto	22 "	16,197,463.50
Toronto twp	20 "	91,801.04
Trafalgar twp. area 1	2 "	2,195.95
Trafalgar twp. area 2	2 "	685.22
Wallaceburg	18 "	161,185.99
Wardsville	15 "	3,148.28
Waterdown	22 "	19,935.44
Waterford	18 "	27,720.56
Waterloo	22 "	224,717.52
Watford	16 "	19,789.86
Welland	16 "	244,653.65
Wellesley	17 "	14,493.01
West Lorne	17 "	22,542.40
Weston	22 "	202,504.98
Wheatley	15 "	11,305.94
Windsor	19 "	2,627,410.05
Woodbridge	19 "	26,117.47
Woodstock	22 "	340,738.80
Wyoming	17 "	7,162.83
York twp	18 "	529,327.79
York East twp	14 "	231,196.11
York North twp	15 "	115,470.50
Zurich	16 "	11,461.36
Ontario Reformatory	4 "	3,499.42
Toronto Trans. Com.	17 "	164,176.21
Sandwich, Windsor & Amherstburg Ry. Co.	16 "	169,523.21

Total—Municipalities	$38,868,526.35
Total—Rural power districts	2,251,024.14
Grand total	$41,119,550.49

Rural Power Districts

Operating Account for Year Ended October 31, 1938

Revenue from customers in rural power districts		$2,513,583.83
Cost of power as provided to be paid under Power Commission Act	$1,113,512.31	
Cost of operation, maintenance and administration	642,083.61	
Interest	402,716.64	
Provision for depreciation and obsolescence	175,497.98	
Provision for sinking fund	93,187.90	
		2,426,998.44
Balance		$ 86,585.39

NIAGARA SYSTEM—RURAL LINES

Statement showing Interest, Depreciation and Obsolescence, Contingencies and Sinking Fund charged by the Commission to the Municipalities which operate the respective rural lines for the year ending October 31, 1938

Operated by	Capital cost	Interest	Provision for depreciation and obsolescence	Provision for contingencies	Provision for sinking fund	Total interest depreciation and obsolescence, contingencies and sinking fund charged
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Milton.........	440.82	21.86	8.82	4.41	7.93	43.02
Welland........	19,617.60	823.94	392.35	196.18	353.12	1,765.59
Totals.....	20,058.42	845.80	401.17	200.59	361.05	1,808.61

NIAGARA SYSTEM—RURAL LINES

Statement showing the total Sinking Fund in respect of each line, together with interest allowed thereon to October 31, 1938

Lines operated by	Period of years ending October 31, 1938	Amount
		$ c.
Milton..	25 years	309.96
Welland..	26 years	14,825.55
Total....................................	....	15,135.51

GEORGIAN BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Share of operating		
	To October 31, 1938			Cost of power purchased	Operation, maintenance and administrative expenses	Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Alliston	51.00	111,607.65	295.3	524.17	4,025.03	4,267.25
Arthur	67.00	66,608.02	142.4	252.77	3,143.59	2,607.34
Barrie	32.50	726,878.56	2,817.7	5,001.57	28,416.84	26,153.78
Beaverton	40.00	61,591.93	211.4	375.25	2,822.78	2,261.91
Beeton	66.00	52,067.41	101.4	179.99	1,614.48	2,056.34
Bradford	55.00	69,747.34	173.6	308.15	2,668.38	2,685.32
Brechin	48.50	20,561.82	56.3	99.94	885.54	781.30
Cannington	40.50	46,975.33	157.1	278.86	2,566.07	1,732.75
Chatsworth	45.00	19,777.18	66.1	117.33	893.88	730.78
Chesley	35.50	145,968.21	501.0	889.30	5,762.85	5,369.80
Coldwater	36.50	83,430.32	302.6	537.13	3,050.77	3,039.69
Collingwood	39.00	422,057.73	1,504.7	2,670.92	15,851.05	15,424.12
Cookstown	50.00	24,280.38	68.6	121.77	957.02	920.32
Creemore	53.00	39,326.04	107.5	190.82	1,632.98	1,496.60
Dundalk	37.00	54,387.03	195.0	346.14	2,490.63	1,985.64
Durham	39.00	100,667.19	328.6	583.28	4,528.66	3,734.03
Elmvale	39.50	43,029.49	150.3	266.79	2,049.87	1,578.21
Elmwood	42.50	17,977.23	56.9	101.00	783.08	670.06
Flesherton	45.50	19,741.21	60.8	107.92	955.84	738.86
Grand Valley	53.00	46,817.98	119.8	212.65	2,247.12	1,796.90
Gravenhurst	25.00	170,560.32	813.7	....	7,426.85	5,908.72
Hanover	32.00	278,231.24	1,045.0	1,854.93	10,129.70	10,071.97
Holstein	80.00	10,600.90	18.2	32.31	755.28	423.01
Huntsville	28.00	236,943.29	996.5	....	10,955.22	8,443.20
Kincardine	46.50	226,905.19	634.0	1,125.38	7,677.48	8,600.34
Kirkfield	56.00	12,141.05	25.8	45.80	394.61	474.97
Lucknow	53.50	89,605.41	218.0	386.96	3,257.73	3,459.21
Markdale	37.00	45,275.29	162.2	287.91	1,964.00	1,653.22
Meaford	40.50	175,478.49	568.1	1,008.41	7,440.55	6,493.35
Midland	31.50	674,216.04	2,621.1	4,652.59	26,450.35	24,254.70
Mildmay	47.00	37,567.37	107.5	190.82	1,464.23	1,422.57
Mount Forest	44.00	143,269.86	430.7	764.52	6,421.30	5,381.40
Neustadt	65.00	15,462.74	33.9	60.17	508.46	603.64
Orangeville	44.00	208,521.38	599.9	1,064.85	8,264.25	7,887.79
Owen Sound	32.00	992,022.00	3,838.7	6,813.90	39,386.60	35,727.58

SYSTEM *G.B.—COST OF POWER*

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1938

costs and fixed charges				Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
Provision for depreciation and obsolescence	Provision for contingencies	Provision for stabilization of rates	Provision for sinking fund				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,467.10	334.71	885.90	1,044.49	6.12	12,554.77	15,062.39	2,507.62
962.96	202.50	427.20	638.19	2.95	8,237.50	9,541.29	1,303.79
7,228.18	2,274.63	8,453.10	6,401.60	58.42	83,988.12	91,574.69	7,586.57
681.63	194.66	634.20	553.64	4.38	7,528.45	8,455.95	927.50
778.55	154.85	304.20	503.33	2.10	5,593.84	6,690.20	1,096.36
944.62	212.07	520.80	657.28	3.60	8,000.22	9,546.57	1,546.35
264.70	65.98	168.90	191.24	1.17	2,458.77	2,730.08	271.31
530.64	148.53	471.30	424.12	3.26	6,155.53	6,361.48	205.95
224.08	67.39	198.30	178.87	1.37	2,412.00	2,973.33	561.33
1,619.72	480.88	1,503.00	1,314.35	10.39	16,950.29	17,784.26	833.97
883.63	273.07	907.80	744.01	6.27	9,442.37	11,046.09	1,603.72
4,537.58	1,334.26	4,514.10	3,775.33	31.19	48,138.55	58,684.56	10,546.01
307.81	79.40	205.80	225.26	1.42	2,818.80	3,429.96	611.16
507.66	123.10	322.50	366.32	2.23	4,642.21	5,699.67	1,057.46
581.90	174.00	585.00	486.02	4.04	6,653.37	7,214.88	561.51
1,160.93	329.20	985.80	913.97	6.81	12,242.68	12,813.83	571.15
470.69	141.37	450.90	386.29	3.12	5,347.24	5,935.47	588.23
211.94	63.53	170.70	164.01	1.18	2,165.50	2,418.90	253.40
237.11	61.78	182.40	180.85	1.26	2,466.02	3,012.04	546.02
625.74	145.35	359.40	439.82	2.48	5,829.46	6,351.59	522.13
1,323.07	533.91	2,441.10	1,446.27	16.87	19,096.79	20,342.08	1,245.29
2,853.80	921.26	3,135.00	2,465.29	21.66	31,453.61	33,440.16	1,986.55
164.81	29.97	54.60	103.54	0.38	1,563.90	1,486.64	(77.26)
2,181.45	719.35	2,989.50	2,066.62	20.66	27,376.00	27,902.44	526.44
2,888.83	689.78	1,902.00	2,105.08	13.14	25,002.03	29,479.14	4,477.11
175.67	36.51	77.40	116.26	0.53	1,321.75	1,444.29	122.54
1,226.70	274.89	654.00	846.70	4.52	10,110.71	12,023.17	1,912.46
484.74	141.53	486.60	404.65	3.36	5,426.01	6,674.14	1,248.13
2,024.63	548.81	1,704.30	1,589.36	11.78	20,821.19	23,007.58	2,186.39
6,689.34	2,051.88	7,863.30	5,936.78	54.34	77,953.28	82,564.18	4,610.90
473.23	121.24	322.50	348.20	2.23	4,345.02	5,050.90	705.88
1,748.13	434.51	1,292.10	1,317.19	8.93	17,368.08	18,948.57	1,580.49
221.32	45.98	101.70	147.75	0.70	1,689.72	2,202.37	512.65
2,617.25	638.82	1,799.70	1,930.68	12.44	24,215.78	26,397.03	2,181.25
9,892.38	3,076.86	11,516.10	8,744.96	79.58	115,237.96	122,839.43	7,601.47

GEORGIAN BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating		
	To October 31, 1938			Cost of power pur-chased	Operation, main-tenance and adminis-trative expenses	Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Paisley	54.00	50,973.29	124.6	221.17	1,650.00	1,966.61
Penetanguishene	36.50	203,949.02	707.2	1,255.32	7,398.99	7,492.27
Port Elgin	39.00	115,372.97	338.3	600.50	4,230.72	4,350.92
Port McNicoll	37.00	24,282.98	78.4	139.16	876.22	902.59
Port Perry	46.50	93,671.68	257.4	456.89	4,182.51	3,563.40
Priceville	60.00	8,590.12	15.5	27.51	302.86	178.16
Ripley	70.00	31,874.59	61.8	109.70	1,257.04	1,259.10
Rosseau	88.00	28,089.56	40.4	....	912.89	1,137.48
Shelburne	42.00	72,895.18	222.6	395.13	3,324.60	2,731.75
Southampton	39.00	95,480.38	289.1	513.17	3,550.51	3,584.20
Stayner	40.00	67,182.42	231.6	411.10	2,796.15	2,469.67
Sunderland	54.00	28,367.18	69.7	123.72	1,349.99	1,092.52
Tara	42.50	31,359.73	97.1	172.36	1,271.91	1,173.34
Teeswater	52.50	49,811.47	125.6	222.95	1,885.33	1,914.82
Thornton	60.50	11,698.04	25.2	44.73	480.88	457.49
Tottenham	83.00	40,130.91	67.5	119.82	1,339.31	1,604.21
Uxbridge	48.50	96,080.65	254.6	451.92	4,045.30	3,672.11
Victoria Harbour	40.00	20,515.15	64.8	115.02	770.98	765.12
Walkerton	34.50	166,972.06	635.7	1,128.40	6,534.76	6,028.83
Waubaushene	40.00	27,385.14	98.1	174.13	1,113.93	999.98
Wiarton	58.00	121,768.83	277.5	492.58	3,946.42	4,736.15
Windermere	60.00	15,898.07	35.7	....	591.70	598.67
Wingham	52.50	155,223.75	371.6	659.61	4,747.83	5,994.95
Woodville	54.00	24,062.62	60.9	108.10	1,363.12	923.48
Totals—Municipalities		7,071,934.41	24,081.3	39,397.29	279,767.02	260,434.49
Totals—Rural power districts		1,476,620.79	4,801.4	11,473.96	55,836.68	54,688.53
Totals—Companies		328,033.22	1,071.7	1,902.33	11,397.39	12,166.41
Totals—Local distribution systems		253,167.01	493.3	875.63	13,059.22	9,726.04
		9,129,755.43				
Non-operating capital		29,481.64				
Grand totals		9,159,237.07	30,447.7	53,649.21	360,060.31	337,015.47

SYSTEM *G.B.—COST OF POWER*

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1938

costs and fixed charges				Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
Provision for depreciation and obsolescence	Provision for contingencies	Provision for stabilization of rates	Provision for sinking fund				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
696.24	161.15	373.80	481.36	2.58	5,552.91	6,730.20	1,177.29
2,245.62	630.87	2,121.60	1,833.87	14.66	22,993.20	25,811.75	2,818.55
1,430.74	353.95	1,014.90	1,064.96	7.01	13,053.70	13,193.74	140.04
282.42	83.08	235.20	220.93	1.63	2,741.23	2,899.52	158.29
1,206.20	280.59	772.20	872.20	5.34	11,339.33	11,970.59	631.26
55.71	16.56	46.50	43.61	0.32	671.23	927.00	255.77
477.21	94.10	185.40	308.19	1.28	3,692.02	4,512.04	820.02
458.11	81.39	121.20	278.42	0.84	2,990.33	3,551.85	561.52
880.46	236.76	667.80	668.64	4.61	8,909.75	9,349.60	439.85
1,160.39	297.21	867.30	877.30	5.99	10,856.07	11,274.12	418.05
742.87	220.36	694.80	604.49	4.80	7,944.24	9,262.57	1,318.33
385.94	86.53	209.10	267.41	1.44	3,516.65	3,765.60	248.95
375.57	104.46	291.30	287.20	2.01	3,678.15	4,125.29	447.14
670.41	171.69	376.80	468.69	2.60	5,713.29	6,595.71	882.42
168.59	38.71	75.60	111.98	0.52	1,378.50	1,522.55	144.05
627.68	116.76	202.50	392.66	1.40	4,404.34	5,603.15	1,198.81
1,261.64	288.33	763.80	898.81	5.28	11,387.19	12,348.06	960.87
242.31	66.89	194.40	187.28	1.34	2,343.34	2,593.63	250.29
1,690.36	531.71	1,907.10	1,475.66	13.18	19,310.00	21,932.45	2,622.45
293.22	93.46	294.30	244.77	2.03	3,215.82	3,923.96	708.14
1,716.23	364.58	832.50	1,159.26	5.75	13,253.47	16,092.35	2,838.88
215.85	49.19	107.10	146.54	0.74	1,709.79	2,141.50	431.71
2,136.78	480.56	1,114.80	1,467.37	7.70	16,609.60	19,511.15	2,901.55
322.76	72.21	182.70	226.04	1.26	3,199.67	3,289.05	89.38
78,935.83	22,047.66	72,243.90	63,745.96	499.19	817,071.34	904,056.78	87,062.70 (77.26)
17,383.02	4,727.89	14,404.20	13,385.99	99.56	171,999.83	171,999.83	....
3,780.79	1,041.00	....	2,977.94	(3,045.73)	30,220.13	30,220.13	....
3,658.41	1,402.86	....	2,380.63	2,446.98	33,549.77	33,549.77	....
103,758.05	29,219.41	86,648.10	82,490.52	....	1,052,841.07	1,139,826.51	87,062.70 (77.26)

GEORGIAN BAY

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Alliston	June 1918	1,209.48			1,209.48
Arthur	Dec. 1916	565.28		413.23	978.51
Barrie	April 1913	3,207.45			3,207.45
Beaverton	Nov. 1914	267.72			267.72
Beeton	Aug. 1918	358.59			358.59
Bradford	Oct. 1918	755.57			755.57
Brechin	Jan. 1915		70.43	74.29	3.86
Cannington	Nov. 1914	142.05			142.05
Chatsworth	Dec. 1915	450.46			450.46
Chesley	July 1916	582.09			582.09
Coldwater	Mar. 1913	1,195.66			1,195.66
Collingwood	Mar. 1913	3,883.56			3,883.56
Cookstown	May 1918	180.56			180.56
Creemore	Nov. 1914	343.20			343.20
Dundalk	Dec. 1915		75.84	75.84	
Durham	Dec. 1915		224.25	224.25	
Elmvale	June 1913	313.72			313.72
Elmwood	April 1918	151.51			151.51
Flesherton	Dec. 1915	108.05			108.05
Grand Valley	Dec. 1916	300.44			300.44
Gravenhurst	Nov. 1915	1,321.16			1,321.16
Hanover	Sept. 1916	636.41			636.41
Holstein	May 1916		127.37	127.37	
Huntsville	Sept. 1916	490.29			490.29
Kincardine	Mar. 1921	1,900.45			1,900.45
Kirkfield	June 1920	35.43			35.43
Lucknow	Jan. 1921	713.15			713.15
Markdale	Mar. 1916	223.10			223.10
Meaford	Jan. 1924	792.80			792.80
Midland	July 1911	2,320.87			2,320.87
Mildmay	Dec. 1932	407.59			407.59
Mount Forest	Dec. 1915	365.69			365.69
Neustadt	Dec. 1918	1,106.12			1,106.12
Orangeville	July 1916	388.11			388.11
Owen Sound	Dec. 1915	2,417.02			2,417.02

SYSTEM *G.B.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
20.62		2,507.62		2,528.24	
23.61		1,303.79		1,327.40	
52.72		7,586.57		7,639.29	
5.49		927.50		932.99	
6.17		1,096.36		1,102.53	
15.06		1,546.35		1,561.41	
	1.24	271.31		270.07	
2.26		205.95		208.21	
12.12		561.33		573.45	
9.63		833.97		843.60	
17.71		1,603.72		1,621.43	
64.69		10,546.01		10,610.70	
4.39		611.16		615.55	
5.64		1,057.46		1,063.10	
	1.08	561.51		560.43	
	3.56	571.15		567.59	
4.92		588.23		593.15	
2.11		253.40		255.51	
1.48		546.02		547.50	
4.18		522.13		526.31	
22.44		1,245.29		1,267.73	
11.30		1,986.55		1,997.85	
	3.84		77.26		81.10
8.33		526.44		534.77	
31.86		4,477.11		4,508.97	
0.59		122.54		123.13	
12.43		1,912.46		1,924.89	
3.72		1,248.13		1,251.85	
13.47		2,186.39		2,199.86	
39.42		4,610.90		4,650.32	
6.43		705.88		712.31	
6.13		1,580.49		1,586.62	
13.99		512.65		526.64	
6.34		2,181.25		2,187.59	
40.26		7,601.47		7,641.73	

GEORGIAN BAY

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Paisley	Sept. 1923	546.38	....	....	546.38
Penetanguishene	July 1911	1,326.04	....	....	1,326.04
Port Elgin	Mar. 1931	....	564.86	564.86	....
Port McNicoll	Jan. 1915	49.58	....	....	49.58
Port Perry	Sept. 1922	464.24	....	....	464.24
Priceville	Mar. 1920	183.97	....	....	183.97
Ripley	Jan. 1921	132.02	....	....	132.02
Rosseau	July 1931	96.28	....	....	96.28
Shelburne	July 1916	94.32	....	....	94.32
Southampton	Feb. 1931	....	259.29	259.29	....
Stayner	Oct. 1913	445.07	....	....	445.07
Sunderland	Nov. 1914	....	120.64	120.64	....
Tara	Feb. 1918	265.44	....	....	265.44
Teeswater	Dec. 1920	405.57	....	....	405.57
Thornton	Nov. 1918	40.42	....	.... 2.83	43.25
Tottenham	Oct. 1918	555.35	....	....	555.35
Uxbridge	Sept. 1922	471.53	....	....	471.53
Victoria Harbour	July 1914	51.87	....	....	51.87
Walkerton	Feb. 1931	1,866.19	....	....	1,866.19
Waubaushene	Dec. 1914	217.91	....	....	217.91
Wiarton	May 1931	1,469.60	....	....	1,469.60
Windermere	June 1930	322.18	....	....	322.18
Wingham	Dec. 1920	1,650.03	....	....	1,650.03
Woodville	Nov. 1914	130.35	....	....	130.35
Totals—Municipalities	....	37,917.92	1,442.68	1,862.60	38,337.84
Totals—Rural power districts	....	61,913.10	111,647.98	262.17	....
Grand totals	....	99,831.02	113,090.66	2,124.77	38,337.84

SYSTEM *G.B.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
8.74	....	1,177.29	....	1,186.03	....
21.80	....	2,818.55	....	2,840.35	....
....	8.73	140.04	....	131.31	....
0.79	....	158.29	....	159.08	....
7.53	....	631.26	....	638.79	....
4.11	....	255.77	....	259.88	....
2.17	....	820.02	....	822.19	....
1.32	....	561.52	....	562.84	....
1.55	....	439.85	....	441.40	....
....	4.09	418.05	....	413.96	....
6.24	....	1,318.33	....	1,324.57	....
....	1.68	248.95	....	247.27	....
4.62	....	447.14	....	451.76	....
7.11	....	882.42	....	889.53	....
0.79	....	144.05	....	144.84	....
9.88	....	1,198.81	....	1,208.69	....
7.80	....	960.87	....	968.67	....
0.78	....	250.29	....	251.07	....
26.05	....	2,622.45	....	2,648.50	....
3.41	....	708.14	....	711.55	....
25.37	....	2,838.88	....	2,864.25	....
7.96	....	431.71	....	439.67	....
26.22	....	2,901.55	....	2,927.77	....
2.06	....	89.38	....	91.44	....
645.81	24.22	87,062.70	77.26	87,688.13	81.10
2,479.87	4,461.40	8,665.23	40,418.45	66,759.44	149,966.90
3,125.68	4,485.62	95,727.93	40,495.71	154,447.57	150,048.00

GEORGIAN BAY SYSTEM *G.B.—SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with the proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1938

Municipality	Period of years ending Oct. 31, 1938	Amount	Municipality	Period of years ending Oct. 31, 1938	Amount
		$ c.			$ c.
Alliston	15 years	19,510.76	Mildmay	6 years	2,073.55
Arthur	17 "	16,978.45	Mount Forest	18 "	27,365.76
Barrie	20 "	125,196.57	Neustadt	15 "	5,804.97
Beaverton	19 "	18,104.00	Orangeville	17 "	37,309.33
Beeton	15 "	13,701.27	Owen Sound	18 "	174,616.20
Bradford	15 "	15,694.62	Paisley	14 "	9,344.82
Brechin	19 "	6,887.03	Penetanguishene	22 "	54,827.33
Cannington	19 "	13,693.04	Port Elgin	8 "	7,763.52
Chatsworth	18 "	3,760.62	Port McNicoll	19 "	5,411.07
Chesley	17 "	31,042.85	Port Perry	14 "	14,416.65
Coldwater	20 "	12,994.76	Priceville	14 "	822.68
Collingwood	20 "	119,660.45	Ripley	14 "	6,519.08
Cookstown	15 "	4,540.92	Rosseau	8 "	2,636.55
Creemore	19 "	10,362.51	Shelburne	17 "	16,422.06
Dundalk	18 "	10,633.46	Southampton	8 "	6,933.46
Durham	18 "	27,269.42	Stayner	20 "	14,109.02
Elmvale	20 "	13,357.70	Sunderland	19 "	9,041.00
Elmwood	15 "	3,514.67	Tara	15 "	7,309.52
Flesherton	18 "	5,817.84	Teeswater	14 "	10,461.94
Grand Valley	17 "	10,452.75	Thornton	15 "	2,885.19
Gravenhurst	18 "	22,884.94	Tottenham	15 "	9,169.54
Hanover	17 "	71,129.41	Uxbridge	14 "	15,217.55
Holstein	17 "	2,354.00	Victoria Harbour	19 "	5,689.23
Huntsville	17 "	49,876.98	Walkerton	8 "	12,852.23
Kincardine	14 "	35,154.02	Waubaushene	19 "	3,527.16
Kirkfield	14 "	2,777.48	Wiarton	8 "	10,314.99
Lucknow	14 "	16,495.19	Windermere	9 "	1,880.32
Markdale	17 "	8,657.55	Wingham	14 "	30,710.52
Meaford	14 "	24,456.63	Woodville	19 "	8,868.19
Midland	20 "	189,935.15			
			Totals—Municipalities		1,421,198.47
			Totals—Rural power districts		209,752.25
			Grand total		1,630,950.72

GEORGIAN BAY SYSTEM *G.B.—RURAL OPERATING*

Rural Power Districts

Operating Account for Year Ending October 31, 1938

Revenue		$365,266.27
Cost of power as provided to be paid under Power Commission Act	$171,999.83	
Cost of operation, maintenance and administration	110,990.34	
Interest	67,455.23	
Provision for depreciation and obsolescence	30,063.24	
Provision for sinking fund	16,510.85	
		397,019.49
Balance		$ 31,753.22

GEORGIAN BAY SYSTEM—RURAL LINES

Statement showing Interest, Depreciation and Obsolescence, Contingencies and Sinking Fund charged by the Commission to the Municipalities which operate the respective rural lines for the year ending October 31, 1938

Operated by	Capital cost	Interest	Provision for depreciation and obsolescence	Provision for contingencies	Provision for sinking fund	Total interest, depreciation and obsolescence, contingencies and sinking fund charged
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Brechin	922.02	48.22	18.44	9.22	16.60	92.48
Flesherton	1,915.15	107.44	38.30	19.15	34.47	199.36
Totals	2,837.17	155.66	56.74	28.37	51.07	291.84

GEORGIAN BAY SYSTEM—RURAL LINES

Statement showing the total Sinking Fund paid in respect of each line, together with interest allowed thereon to October 31, 1938

Lines operated by	Period of years ending October 31, 1938	Amount
		$ c.
Brechin	20 years	459.52
Flesherton	21 years	845.33
Total		1,304.85

EASTERN ONTARIO

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year To October 31, 1938	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating		
				Cost of power purchased	Operation, maintenance and administrative expenses	Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Alexandria	55.00	77,025.04	188.5	1,183.31	2,150.40	3,504.96
Apple Hill	44.00	10,774.59	36.2	227.25	417.27	489.99
Athens	45.00	35,953.69	101.2	635.29	953.02	1,567.41
Bath	66.00	15,809.23	33.1	207.79	410.51	719.19
Belleville	28.00	830,668.31	5,169.9	32,454.21	30,412.82	37,690.46
Bloomfield	47.00	31,024.40	94.9	595.74	1,146.92	1,408.16
Bowmanville	31.00	435,600.53	2,156.5	13,537.50	17,243.94	19,723.14
Brighton	32.00	58,721.88	277.6	1,742.64	2,207.86	2,662.38
Brockville	26.00	496,215.71	3,330.5	20,907.32	19,234.44	22,447.41
Cardinal	29.00	35,467.73	225.2	1,413.70	1,731.32	1,587.78
Carleton Place	29.00	228,998.60	1,482.8	9,308.32	8,618.28	11,565.77
Chesterville	34.00	44,331.16	226.0	1,418.72	2,015.31	2,013.54
Cobden	65.00	26,467.95	61.0	382.93	994.70	1,203.71
Cobourg	31.00	314,720.49	1,607.4	10,090.50	12,439.94	14,262.98
Colborne	33.00	34,058.94	158.9	997.50	1,463.82	1,544.30
Deseronto	45.00	45,433.69	143.4	900.20	2,139.31	2,064.89
Finch	47.00	19,147.68	70.0	439.43	745.72	870.54
Hastings	42.00	25,489.91	88.8	557.44	1,122.75	1,157.25
Havelock	46.50	47,982.53	138.5	869.44	1,721.57	2,179.89
Kemptville	35.00	73,290.05	332.7	2,088.54	2,688.02	3,330.42
Kingston	27.00	1,530,742.20	8,185.3	51,383.48	51,566.56	69,433.79
Lakefield	39.00	65,984.19	257.3	1,615.21	2,202.78	2,994.38
Lanark	40.00	20,825.54	74.7	468.93	739.69	929.68
Lancaster	62.00	17,002.80	38.1	239.17	533.80	773.79
Lindsay	34.00	473,373.48	2,269.2	14,244.98	19,853.11	21,440.59
Madoc	40.50	48,973.30	164.8	1,034.54	2,366.34	2,225.35
Marmora	40.50	26,884.55	109.0	684.25	963.91	1,220.90
Martintown	43.50	6,884.67	30.4	190.84	413.16	312.89
Maxville	51.00	27,935.43	84.5	530.45	968.97	1,270.68
Morrisburg	32.50	20,281.24	56.2	352.80	698.02	504.51
Napanee	30.00	212,818.02	1,113.7	6,991.29	8,272.78	9,654.34
Newcastle	32.50	29,279.01	134.6	844.96	1,375.27	1,327.59
Norwood	35.50	20,597.38	92.4	580.04	958.89	934.11
Oshawa	30.50	2,717,850.58	13,483.8	84,644.98	97,582.65	123,109.42
Ottawa	20.50	931,993.89	9,314.3	58,470.81	44,952.50	42,200.13

SYSTEM *E.O.—COST OF POWER*

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1938

costs and fixed charges							
Provision for depreciation and obsolescence	Provision for contingencies	Provision for stabilization of rates	Provision for sinking fund	Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,329.12	248.18	188.50	809.78	129.59	9,543.84	10,369.28	825.44
174.90	41.56	36.20	113.21	24.89	1,525.27	1,590.92	65.65
575.65	115.63	101.20	362.13	69.57	4,379.90	4,553.96	174.06
256.89	47.79	33.10	166.16	22.75	1,864.18	2,185.15	320.97
7,370.28	2,801.74	5,169.90	8,707.96	3,554.07	128,161.44	144,755.75	16,594.31
449.62	100.01	94.90	325.34	65.24	4,185.93	4,457.91	271.98
4,830.27	1,500.05	2,156.50	4,556.82	1,482.49	65,030.71	66,850.94	1,820.23
675.96	215.86	277.60	615.11	190.84	8,588.25	8,883.72	295.47
6,159.06	1,989.25	3,330.50	5,186.23	2,289.57	81,543.78	86,593.66	5,049.88
447.15	150.04	225.20	366.84	154.81	6,076.84	6,531.01	454.17
3,458.89	979.10	1,482.80	2,672.14	1,019.36	39,104.66	42,999.75	3,895.09
633.10	169.02	226.00	465.21	155.36	7,096.26	7,682.29	586.03
461.71	87.73	61.00	278.10	41.93	3,511.81	3,966.04	454.23
3,408.09	1,111.51	1,607.40	3,295.31	1,105.01	47,320.74	49,828.32	2,507.58
395.85	125.35	158.90	356.79	109.23	5,151.74	5,244.51	92.77
651.79	173.88	143.40	477.07	98.58	6,649.12	6,452.68	(196.44)
304.42	67.55	70.00	201.13	48.12	2,746.91	3,289.97	543.06
350.34	89.60	88.80	267.37	61.05	3,694.60	3,728.55	33.95
710.95	160.33	138.50	503.64	95.21	6,379.53	6,438.20	58.67
1,098.77	265.48	332.70	769.46	228.72	10,802.11	11,645.62	843.51
15,951.95	5,042.79	8,185.30	16,041.91	5,627.02	223,232.80	221,003.08	(2,229.72)
857.66	220.17	257.30	691.82	176.88	9,016.20	10,034.88	1,018.68
326.54	74.27	74.70	214.79	51.35	2,879.95	2,989.64	109.69
297.33	55.34	38.10	178.78	26.19	2,142.50	2,361.63	219.13
5,384.04	1,580.43	2,269.20	4,953.61	1,559.97	71,285.93	77,152.48	5,866.55
684.25	173.45	164.80	514.14	113.29	7,276.16	6,672.65	(603.51)
342.43	101.47	109.00	282.08	74.93	3,778.97	4,415.13	636.16
103.61	26.68	30.40	72.29	20.90	1,170.77	1,322.74	151.97
463.94	95.62	84.50	293.58	58.09	3,765.83	4,309.91	544.08
159.11	48.66	56.20	116.56	38.63	1,974.49	1,825.67	(148.82)
2,261.31	755.21	1,113.70	2,230.53	765.62	32,044.78	33,412.25	1,367.47
343.85	104.99	134.60	306.72	92.53	4,530.51	4,375.25	(155.26)
246.03	78.43	92.40	215.82	63.52	3,169.24	3,278.97	109.73
30,108.76	9,144.24	13,483.80	28,443.08	9,269.49	395,786.42	411,256.88	15,470.46
8,177.56	4,050.55	9,314.30	9,749.88	6,403.17	183,318.90	190,943.78	7,624.88

EASTERN ONTARIO

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual cost

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating		
	To October 31, 1938			Cost of power pur-chased	Operation, main-tenance and adminis-trative expenses	Interest
	$ c.	$ c.		$ c.	$ c.	$ c.
Ottawa	.....	964.71	19,415.9	213,575.07	290.56	43.97
Perth	28.00	225,908.89	1,403.3	8,809.26	8,590 11	10,254.42
Peterborough	26.00	1,511,920.88	9,017.6	56,608.27	52,099.72	68,452.27
Picton	39.50	266,344.60	974.8	6,119.34	8,599.09	12,070.69
Port Hope	32.50	323,946.19	1,705.9	10,708.84	15,600.70	14,678.34
Prescott	26.50	136,365.11	904.8	5,679.91	5,745.85	6,068.45
Richmond	52.00	16,962.38	49.2	308.85	466.56	771.62
Russell	50.00	17,437.60	56.1	352.17	644.54	793.03
Smiths Falls	25.00	299,865.52	2,141.8	13,445.22	11,939.35	13,621.03
Stirling	27.00	41,919.59	253.1	1,588.85	1,738.18	1,900.28
Trenton	24.00	502,256.34	3,303.0	20,734.69	17,243.34	22,757.41
Tweed	52.00	67,553.57	206.9	1,298.82	2,981.19	3,070.26
Warkworth	40.00	19,168.07	68.9	432.52	723.90	859.60
Wellington	38.00	48,863.49	191.9	1,204.66	1,785.08	2,215.28
Westport	62.00	37,157.19	80.5	505.34	701.65	1,691.11
Whitby	30.50	234,167.12	1,163.6	7,304.54	8,163.64	10,615.14
Williamsburg	28.00	26,494.22	162.5	1,020.10	1,246.89	1,202.56
Winchester	31.00	48,464.07	265.5	1,666.68	2,196.71	2,200.69
Totals—Municipalities		12,864,367.93	92,696.7	673,597.63	484,063.41	583,592.47
Totals—Rural power districts		1,617,315.04	8,303.1	54,683.20	59,321.95	72,598.51
Totals—Companies		3,599,944.71	20,478.3	155,259.23	127,978.27	163,318.92
Totals—Local electric distribution systems		589,868.13	2,034.4	12,771.03	49,246.65	26,341.13
Totals—Local gas distribution system		25,913.01	....	....	14,995.01	1,184.38
Totals—Pulp mill		280,192.97	1,421.4	8,922.88	28,296.99	12,734.95
		18,977,601.79				
Non-operating capital		64,382.02				
Grand Totals		19,041,983.81	124,933.9	905,233.97	763,902.28	859,770.36

SYSTEM *E.O.—COST OF POWER*

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1938

costs and fixed charges				Cost in excess of revenue from power sold to private companies	Total cost of power for year as provided to be paid under Power Commission Act	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality Credited (Charged)
Provision for depreciation and obsolescence	Provision for contingencies	Provision for stabilization of rates	Provision for sinking fund				
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
19.29	4.82	....	10.16	....	213,943.87	213,943.87	....
2,970.10	890.71	1,403.30	2,369.17	964.70	36,251.77	39,293.08	3,041.31
14,045.10	4,998.23	9,017.60	15,815.15	6,199.19	227,235.53	234,457.99	7,222.46
3,568.01	848.37	974.80	2,788.80	670.13	35,639.23	38,503.23	2,864.00
3,415.66	1,124.78	1,705.90	3,391.27	1,172.73	51,798.22	55,442.53	3,644.31
1,660.13	551.71	904.80	1,402.05	622.01	22,634.91	23,977.83	1,342.92
283.99	55.62	49.20	178.28	33.82	2,147.94	2,556.62	408.68
285.81	59.85	56.10	183.22	38.57	2,413.29	2,805.36	392.07
3,642.42	1,230.10	2,141.80	3,146.99	1,472.41	50,639.32	53,545.37	2,906.05
385.00	140.23	253.10	439.04	173.99	6,618.67	6,833.90	215.23
4,128.40	1,685.76	3,303.00	5,257.85	2,270.66	77,381.11	79,270.84	1,889.73
980.35	214.67	206.90	709.35	142.23	9,603.77	10,760.94	1,157.17
255.01	65.13	68.90	198.60	47.37	2,651.03	2,756.65	105.62
631.77	164.20	191.90	511.82	131.92	6,836.63	7,293.10	456.47
654.34	122.51	80.50	390.71	55.34	4,201.50	4,991.98	790.48
2,594.43	755.95	1,163.60	2,452.51	799.92	33,849.73	35,489.02	1,639.29
347.60	113.08	162.50	277.84	111.71	4,482.28	4,550.67	68.39
671.45	196.24	265.50	508.44	182.52	7,888.23	8,229.43	341.20
139,990.04	45,213.92	73,280.80	134,832.64	50,377.19	2,184,948.10	2,278,105.58	96,491.23 (3,333.75)
19,547.60	5,853.77	8,213.80	16,773.14	5,646.60	242,638.57	242,638.57	....
39,676.82	13,388.69	....	44,515.52	(42,154.89)	501,982.56	501,982.56	....
8,810.99	1,387.62	....	3,886.72	12,565.33	115,009.47	115,009.47	....
....	....	....	....	(3,287.94)	12,891.45	12,891.45	....
2,006.47	783.95	....	2,383.67	(23,146.29)	31,982.62	31,982.62	....
210,031.92	66,627.95	81,494.60	202,391.69	....	3,089,452.77	3,182,610.25	96,491.23 (3,333.75)

EASTERN ONTARIO

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Alexandria	Jan. 1921	882.15			882.15
Apple Hill	April 1921	142.15			142.15
Athens	Jan. 1929	534.54			534.54
Bath	Nov. 1931	264.09			264.09
Belleville	April 1929	9,602.51			9,602.51
Bloomfield	April 1919		112.99	112.99	
Bowmanville	Oct. 1931	5,140.25			5,140.25
Brighton	Nov. 1929	638.61			638.61
Brockville	April 1915	5,163.51			5,163.51
Cardinal	July 1930	557.54			557.54
Carleton Place	May 1919	4,760.88			4,760.88
Chesterville	April 1914	974.23			974.23
Cobden	Nov. 1935	367.46			367.46
Cobourg	Jan. 1932	3,001.01			3,001.01
Colborne	Jan. 1933	370.34			370.34
Deseronto	Jan. 1931	756.18			756.18
Finch	Feb. 1928	717.46			717.46
Hastings	June 1931	343.98			343.98
Havelock	Feb. 1921	537.93			537.93
Kemptville	Dec. 1921	1,380.27			1,380.27
Kingston	Nov. 1937				
Lakefield	Aug. 1920	1,842.27			1,842.27
Lanark	Sept. 1921	253.80			253.80
Lancaster	May 1921	279.88			279.88
Lindsay	Mar. 1928	6,700.53			6,700.53
Madoc	Jan. 1930	48.93			48.93
Marmora	Jan. 1921	465.15			465.15
Martintown	May 1921	9.43			9.43
Maxville	Feb. 1921	630.06			630.06
Morrisburg	June 1938				
Napanee	Nov. 1929	3,709.34			3,709.34
Newcastle	Jan. 1937	38.50			38.50
Norwood	Feb. 1921	242.27			242.27
Oshawa	Feb. 1929	34,065.12			34,065.12
Ottawa	Jan. 1914	3,084.00			3,084.00

SYSTEM *E.O.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
15.02		825.44		840.46	
2.48		65.65		68.13	
9.41		174.06		183.47	
2.69		320.97		323.66	
161.01		16,594.31		16,755.32	
	1.88	271.98		270.10	
85.62		1,820.23		1,905.85	
10.64		295.47		306.11	
70.17		5,049.88		5,120.05	
9.71		454.17		463.88	
71.43		3,895.09		3,966.52	
20.55		586.03		606.58	
6.04		454.23		460.27	
49.99		2,507.58		2,557.57	
5.72		92.77		98.49	
13.28			196.44		183.16
13.84		543.06		556.90	
4.75		33.95		38.70	
8.78		58.67		67.45	
18.30		843.51		861.81	
			2,229.72		2,229.72
33.22		1,018.68		1,051.90	
3.87		109.69		113.56	
6.04		219.13		225.17	
113.29		5,866.55		5,979.84	
0.80			603.51		602.71
8.01		636.16		644.17	
0.18		151.97		152.15	
11.35		544.08		555.43	
			148.82		148.82
65.80		1,367.47		1,433.27	
0.39			155.26		154.87
3.77		109.73		113.50	
563.71		15,470.46		16,034.17	
49.34		7,624.88		7,674.22	

EASTERN ONTARIO

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Perth	Feb. 1919	2,481.21	....	....	2,481.21
Peterborough	Mar. 1913	14,225.40	....	....	14,225.40
Picton	April 1919	1,191.54	....	....	1,191.54
Port Hope	Nov. 1929	4,169.39	....	....	4,169.39
Prescott	Dec. 1913	1,473.94	....	....	1,473.94
Richmond	Aug. 1928	381.21	....	....	381.21
Russell	Feb. 1926	528.61	....	....	528.61
Smiths Falls	Sept. 1918	1,967.10	....	....	1,967.10
Stirling	Jan. 1930	265.57	....	....	265.57
Trenton	Sept. 1931	3,641.01	....	....	3,641.01
Tweed	Dec. 1930	1,171.84	....	....	1,171.84
Warkworth	Oct. 1923	339.05	....	....	339.05
Wellington	April 1919	418.86	....	....	418.86
Westport	Nov. 1931	860.74	....	....	860.74
Whitby	Jan. 1926	2,271.73	....	....	2,271.73
Williamsburg	April 1915	150.99	....	....	150.99
Winchester	Jan. 1914	819.33	....	....	819.33
Totals—Municipalities	....	123,861.89	112.99	112.99	123,861.89
Totals—Rural power districts	....	171,378.98	86,265.16	129.55	....
Totals	....	295,240.87	86,378.15	242.54	123,861.89

SYSTEM *E.O.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
42.15	....	3,041.31	....	3,083.46	....
236.96	....	7,222.46	....	7,459.42	....
20.24	....	2,864.00	....	2,884.24	....
62.60	....	3,644.31	....	3,706.91	....
30.04	....	1,342.92	....	1,372.96	....
9.01	....	408.68	....	417.69	....
14.35	....	392.07	....	406.42	....
32.98	....	2,906.05	....	2,939.03	....
4.66	....	215.23	....	219.89	....
60.65	....	1,889.73	....	1,950.38	....
20.63	....	1,157.17	....	1,177.80	....
6.01	....	105.62	....	111.63	....
6.70	....	456.47	....	463.17	....
16.10	....	790.48	....	806.58	....
35.60	....	1,639.29	....	1,674.89	....
2.12	....	68.39	....	70.51	....
12.93	....	341.20	....	354.13	....
2,052.93	1.88	96,491.23	3,333.75	98,527.81	3,319.28
6,855.15	3,446.29	30,346.01	22,604.72	201,832.67	105,439.15
8,908.08	3,448.17	126,837.24	25,938.47	300,360.48	108,758.43

EASTERN ONTARIO SYSTEM *E.O.—SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with its proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1938

Municipality	Period of years ending Oct. 31, 1938	Amount
		$ c.
Alexandria	14 years	26,692.13
Apple Hill	14 "	2,815.18
Athens	10 "	4,977.16
Bath	7 "	1,618.55
Belleville	10 "	135,803.85
Bloomfield	10 "	4,985.86
Bowmanville	7 "	43,860.54
Brighton	9 "	8,885.98
Brockville	18 "	145,339.54
Cardinal	9 "	4,090.60
Carleton Place	14 "	66,856.86
Chesterville	19 "	23,997.27
Cobden	3 "	606.64
Cobourg	7 "	32,471.66
Colborne	6 "	2,663.53
Deseronto	8 "	5,407.46
Finch	11 "	3,493.86
Hastings	8 "	2,763.88
Havelock	10 "	10,135.66
Kemptville	14 "	17,314.44
Kingston	1 "	20,157.74
Lakefield	10 "	10,347.42
Lanark	14 "	5,257.21
Lancaster	14 "	5,336.57
Lindsay	10 "	74,555.13
Madoc	9 "	5,998.61
Marmora	10 "	4,460.92
Martintown	14 "	1,763.11
Maxville	14 "	8,180.44
Morrisburg	1 "	144.82
Napanee	9 years	33,041.35
Newcastle	2 "	720.60
Norwood	10 "	4,895.29
Oshawa	10 "	415,387.59
Ottawa	23 "	149,442.15
Perth	14 "	58,508.56
Peterborough	10 "	245,063.64
Picton	10 "	42,540.96
Port Hope	9 "	42,894.67
Prescott	19 "	41,124.86
Richmond	11 "	2,233.48
Russell	13 "	4,715.82
Smiths Falls	15 "	85,454.09
Stirling	9 "	6,958.53
Trenton	7 "	57,270.55
Tweed	8 "	7,184.38
Warkworth	10 "	3,126.30
Wellington	10 "	8,214.32
Westport	7 "	3,522.94
Whitby	10 "	40,993.17
Williamsburg	18 "	5,312.30
Winchester	19 "	16,916.99
Totals—Municipalities		1,956,505.16
Totals—Rural power districts		381,803.24
Grand totals		2,338,308.40

Rural Power Districts

Operating Account for Year Ending October 31, 1938

Revenue		$624,335.18
Cost of power as provided to be paid under Power Commission Act	$242,638.57	
Cost of operation, maintenance and administration	174,693.02	
Interest	119,796.53	
Provision for depreciation and obsolescence	51,788.09	
Provision for sinking fund	27,677.68	
		616,593.89
Balance		$ 7,741.29

THUNDER BAY

Statement showing the amount to be paid by each Municipality as the Cost—under received by the Commission from each Municipality on account of such cost; upon ascertainment (by annual adjustment) of the actual Cost

Municipality	Interim rates per horsepower collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating	
	To October 31, 1938			Operation, maintenance and administrative expenses	Interest
	$ c.	$ c.		$ c.	$ c.
Fort William	21.00	2,933,022.99	11,454.8	49,268.92	133,876.44
Port Arthur	21.00	8,443,411.87	33,268.2	139,727.33	385,383.07
Township of Nipigon	30.00	36,778.00	161.6	1,578.34	1,677.94
Totals—Municipalities		11,413,212.86	44,884.6	190,574.59	520,937.45
Totals—Rural power districts		70,448.77	254.8	1,895.55	3,216.48
Totals—Companies and local distribution systems		8,107,286.45	30,185.4	157,523.08	367,828.97
		19,590,948.08			
Non-operating capital		123,152.25			
Grand totals		19,714,100.33	75,324.8	349,993.22	891,982.90

THUNDER BAY

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1938, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		$ c.	$ c.	$ c.	$ c.
Fort William	Oct. 1926	....	1,177.96	1,177.96	....
Port Arthur	Dec. 1910	7,047.62	....	....	7,047.62
Township of Nipigon	Jan. 1925	525.59	....	....	525.59
Total—Municipalities	....	7,573.21	1,177.96	1,177.96	7,573.21
Total—Rural power districts	....	2,304.02	6,752.84	....	....
Grand total	....	9,877.23	7,930.80	1,177.96	7,573.21

SYSTEM *T.B.—COST OF POWER*

the Power Commission Act—of Power supplied to it by the Commission; the amount and the amount remaining to be credited or charged to each Municipality of Power supplied to it in the year ended October 31, 1938

costs and fixed charges			Revenue received in excess of cost of power sold to private companies (Credit)	Total cost of power for year as provided to be paid under Power Commission Act	Amounts received from (or billed against) each municipality by the Commission	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Provision for depreciation and obsolescence	Provision for contingencies	Provision for sinking fund				Credited	Charged
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
25,837.74	13,655.86	30,772.41	6,301.23	247,110.14	241,051.05	....	6,059.09
73,916.00	39,285.88	88,582.89	18,300.67	708,594.50	698,631.11	....	9,963.39
300.57	171.34	385.69	88.90	4,024.98	4,848.14	823.16	....
100,054.31	53,113.08	119,740.99	(24,690.80)	959,729.62	944,530.30	823.16	16,022.48
652.82	329.79	739.32	(140.16)	6,693.80	6,693.80	....	....
57,630.27	32,409.50	162,090.62	24,830.96	802,313.40	802,313.40	....	....
158,337.40	85,852.37	282,570.93	....	1,768,736.82	1,753,537.50	823.16	16,022.48

SYSTEM *T.B.—CREDIT OR CHARGE*

supplied to it to October 31, 1937, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	21.30	....	6,059.09	....	6,080.39
114.31	....	....	9,963.39	....	9,849.08
8.99	....	823.16	....	832.15	....
123.30	21.30	823.16	16,022.48	832.15	15,929.47
92.16	270.11	921.49	1,820.66	3,317.67	8,843.61
215.46	291.41	1,744.65	17,843.14	4,149.82	24,773.08

THUNDER BAY SYSTEM *T.B.—SINKING FUND*

Statement showing Sinking Fund paid by each Municipality in the periods mentioned hereunder, as part of the cost of power delivered thereto, together with the proportionate share of other sinking funds provided out of other revenues of the system, and interest allowed thereon to October 31, 1938

Municipality	Period of years ending October 31, 1938	Amount
		$ c.
Fort William	12 years	538,784.70
Port Arthur	12 "	1,787,337.70
Township of Nipigon	12 "	4,284.37
Totals—Municipalities		2,330,406.77
Totals—Rural power districts		9,481.92
Grand totals		2,339,888.69

MANITOULIN AND NIPISSING

Rural Power Districts

Operating Account for Year Ending October 31, 1938

Revenue		$26,684.59
Cost of power as provided to be paid under Power Commission Act	$12,809.00	
Cost of operation, maintenance and administration	5,591.67	
Interest	4,393.78	
Provision for depreciation and obsolescence	1,524.93	
Provision for sinking fund	838.69	
		25,158.07
Balance		$ 1,526.52

MANITOULIN AND NIPISSING

Statement showing the net Credit or Charge in respect of power supplied to October 31, respect of power supplied in the year ending October 31, 1938, and the accumulated

	Net credit or charge at October 31, 1937		Cash receipts and payments on account of such credits and charges; also adjustments made during the year	
	Credit	Charge	Credited	Charged
	$ c.	$ c.	$ c.	$ c.
Manitoulin		1,580.13		42.66
Nipissing	14,914.22			
Total	14,914.22	1,580.13		42.66

THUNDER BAY SYSTEM *T.B.—RURAL OPERATING*

Rural Power Districts

Operating Account for Year Ending October 31, 1938

Revenue		$18,029.54
Cost of power as provided to be paid under Power Commission Act	$6,693.80	
Cost of operation, maintenance and administration	5,926.75	
Interest	3,785.44	
Provision for depreciation and obsolescence	1,652.62	
Provision for sinking fund	870.10	
		18,928.71
Balance		$ 899.17

MANITOULIN AND NIPISSING RURAL POWER DISTRICTS

Statement showing Sinking Fund paid in the periods mentioned hereunder, as part of the Cost of Power delivered and interest allowed thereon to October 31, 1938

Rural power districts	Total
Manitoulin	2,449.09
Nipissing	$2,433.57
Total	$4,882.66

RURAL POWER DISTRICTS

1937, the interest added during the year; also the net amount credited or charged in amount standing as a credit or charge at October 31, 1938

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1938		Accumulated amount standing as a credit or charge on October 31, 1938	
Credited	Charged	Credited	Charged	Credit	Charge
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	63.21	....	296.03	....	1,982.03
596.57	....	1,893.85	71.30	17,333.34	....
596.57	63.21	1,893.85	367.33	17,333.34	1,982.03

NORTHERN ONTARIO PROPERTIES

(Operated by The Hydro-Electric Power Commission of Ontario)

FINANCIAL ACCOUNTS

For the Year ended October 31, 1938

Relating to Power Properties which are held and operated by the Commission in trust for the Province of Ontario, and which are situated in the following Northern Districts:

Nipissing Sudbury Abitibi Patricia St. Joseph

STATEMENTS

Balance Sheet as at October 31, 1938

Operating Account for the Year ended October 31, 1938

Schedules supporting the Balance Sheet as at October 31, 1938

- Fixed Assets—By Districts
- Depreciation and Obsolescence Reserves
- Contingency Reserves
- Sinking Fund Reserves

NORTHERN ONTARIO

Held and Operated by The Hydro-Electric Power

Balance Sheet as at

ASSETS

FIXED ASSETS:			
Nipissing district		$1,723,670.98	
Sudbury district		4,192,257.97	
Abitibi district		27,998,323.17	
Patricia district		1,360,152.45	
St. Joseph district		714,611.87	
Kenogami River:			
Long Lac diversion		1,021,253.44	
			$37,010,269.88
CURRENT ASSETS:			
Employees' Working Funds		5,425.00	
Hydro-Electric Power Commission of Ontario—Current Account		2,444,261.46	
Sundry Accounts Receivable		27,670.83	
Power Accounts Receivable		313,143.67	
Interest Accrued		9,727.08	
Consumers' deposits—securities:			
Bonds at par value	$503,000.00		
Stocks at market value	27,500.00		
		530,500.00	
Prepayments		43,740.59	
			3,374,468.63
INVENTORIES:			
Maintenance Materials and Supplies		65,581.08	
Maintenance Tools and Equipment		62,305.43	
			127,886.51
DEFERRED ASSETS:			
Work in Progress—deferred work orders			440.84
UNAMORTIZED DISCOUNT ON DEBENTURES			529,223.33
SINKING FUND INVESTMENTS			828,955.51
			$41,871,244.70

PROPERTIES

Commission of Ontario in trust for the Province of Ontario

October 31, 1938.

LIABILITIES AND RESERVES

Long-Term Liabilities:			
Funded debt in the hands of the public		$29,500,000.00	
Advances from the Province of Ontario for capital expenditures		6,370,637.25	
Purchase Agreements—Abitibi district:			
Transformer stations and Transmission Lines		35,236.60	$35,905,873.85
Current Liabilities:			
Accounts payable		137,801.94	
Consumers' deposits		576,382.72	
Debenture interest accrued		108,333.32	
Miscellaneous interest accrued		329.78	822,847.76
Reserves:			
Depreciation and obsolescence		1,755,942.75	
Contingencies		610,079.25	
Miscellaneous		2,931.27	2,368,953.27
Sinking Fund Reserves:			
Represented by:			
Provincial advances repaid through sinking funds		1,828,250.15	
Available balance		836,901.27	2,665,151.42
Surplus Account:			
Total deficits to November, 1937		966,670.40	
Less—Advances from Province of Ontario for operating deficits to October 31, 1934	$453,656.61		
Adjustment re settlement of power agreement claim prior to November 1, 1937	513,013.79		
		966,670.40	
Net Income for the year ended October 31, 1938			108,418.40
			$41,871,244.70

Auditors' Certificate

We have examined the Accounts of the Northern Ontario Properties for the year ended the 31st October, 1938, and report that, in our opinion, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the affairs of Northern Ontario Properties at the 31st October, 1938, according to the best of our information and the explanations given to us and as shown by the books and records of the Properties. We have obtained all the information and explanations we have required.

Oscar Hudson and Co.,
Chartered Accountants,
Auditors.

Dated at Toronto, Ontario,
31st March, 1939.

NORTHERN ONTARIO

EMBRACING THE NIPISSING, SUDBURY, ABITIBI,

Held and Operated by The Hydro-Electric
In Trust for the

Operating Account for the Year

COST OF OPERATION

Power purchased	$ 1,682.58
Costs of operation and maintenance, including the portion of administrative office expense chargeable to the operation of these properties	690,041.11
Interest on capital investment in generation and transmission equipment	1,257,254.94
Provision for depreciation of generation and transmission equipment	307,021.57
Provision for contingencies	76,101.45
Provision for sinking fund	962,438.79
Total costs of operation	$3,294,540.44
Operating surplus for year	108,418.40
	$3,402,958.84

PROPERTIES

PATRICIA (EAR FALLS) AND ST. JOSEPH DISTRICTS

Power Commission of Ontario
Province of Ontario

Ended October 31, 1938.

REVENUE FOR PERIOD

Power sold to private companies and customers	$3,394,926.38
Power sold to rural power districts	8,032.46
	$3,402,958.84

NORTHERN ONTARIO PROPERTIES

Held and Operated by The Hydro-Electric Power Commission of Ontario in Trust for the Province of Ontario
Fixed Assets at October 31, 1938

District	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable including lands and water rights	Depreciable	
	$ c.	$ c.	$ c.	$ c.	$ c.
NIPISSING:					
Power Plants:					
South river:					
Nipissing	33.00	24.50	11,099.60	239,087.34	250,211.44
Bingham Chute	41.38	....	12,093.60	227,839.43	239,933.03
Elliott Chute	5.39	....	119,307.09	335,149.71	454,456.80
Storage Dams	1,600.00	....	....	76,122.70	76,122.70
Miscellaneous	....	....	....	6,390.46	6,390.46
Intangible	....	....	69,478.34	....	69,478.34
	1,679.77	24.50	211,978.63	884,589.64	1,096,592.77
Transformer Stations	*498.77*	....	....	19,610.73	19,610.73
Transmission Lines	16,782.89	....	....	200,732.22	200,732.22
Local Systems	10,821.09	....	22,649.50	384,085.76	406,735.26
	28,784.98	24.50	234,628.13	1,489,018.35	1,723,670.98
SUDBURY:					
Power Plants:					
Wahnapitae river:					
Coniston	144,643.16	32,667.78	13,200.00	635,038.11	680,905.89
McVittie	14,847.06	....	13,200.00	405,906.12	419,106.12
Stinson	*75.91*	....	33,000.00	639,767.84	672,767.84
Storage Dam	25.00	....	....	194,895.00	194,895.00
Intangible	*100.00*	....	830,514.53	....	830,514.53
Sturgeon river:					
Crystal Falls and Storage Dams	805,231.91	....	43,882.17	771,522.93	815,405.10
	964,571.22	32,667.78	933,796.70	2,647,130.00	3,613,594.48
Transformer Stations	23,021.84	1,425.07	....	107,790.23	109,215.30
Transmission Lines	9,534.22	6,507.23	....	416,140.88	422,648.11
Local Systems	43,204.24	12,064.00	....	34,736.08	46,800.08
	1,040,331.52	52,664.08	933,796.70	3,205,797.19	4,192,257.97
ABITIBI:					
Power Plants:					
Abitibi river:					
Abitibi Canyon	46,176.94	69,188.31	5,471,312.35	14,167,602.04	19,708,102.70
Frederickhouse river:					
Frederickhouse Dam	616,659.70	....	71,297.27	1,068,714.03	1,140,011.30
	662,836.64	69,188.31	5,542,609.62	15,236,316.07	20,848,114.00
Transformer Stations	101,109.39	66,397.86	....	1,165,907.83	1,232,305.69
Transmission Lines	117,878.17	27,511.91	625,261.62	5,205,333.00	5,858,106.53
Local Systems	15,560.29	3,406.92	....	56,390.03	59,796.95
	897,384.49	166,505.00	6,167,871.24	21,663,946.93	27,998,323.17

NORTHERN ONTARIO PROPERTIES

Held and Operated by The Hydro-Electric Power Commission of Ontario in Trust for the Province of Ontario
Fixed Assets at October 31, 1938

District	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable including lands and water rights	Depreciable	
	$ c.	$ c.	$ c.	$ c.	$ c.
PATRICIA:					
Power Plants:					
English river:					
Ear Falls	39,172.12	84.93	....	1,100,260.75	1,100,345.68
Transformer Stations	980.76	939.87	....	6,135.21	7,075.08
Transmission Lines	241,917.49	166,031.33	....	76,564.91	242,596.24
Local Systems	10,135.45	....	....	10,135.45	10,135.45
	292,205.82	167,056.13	....	1,193,096.32	1,360,152.45
ST. JOSEPH:					
Power Plants:					
Albany river:					
Rat Rapids	4,997.53	....	33,459.55	638,917.54	672,377.09
Donation in aid of construction	....	....	....	*80,000.00*	*80,000.00*
	4,997.53	....	33,459.55	558,917.54	592,377.09
Transformer Stations	....	....	....	5,029.02	5,029.02
Transmission Lines	151.54	151.54	....	117,054.22	117,205.76
	5,149.07	151.54	33,459.55	681,000.78	714,611.87
KENOGAMI RIVER:					
Long Lac diversion	682,095.35	591,524.65	429,728.79	....	1,021,253.44

SUMMARY

District	Net capital expenditures in the year	Fixed Assets			Total
		Under construction	In service		
			Non-depreciable including lands and water rights	Depreciable	
	$ c.	$ c.	$ c.	$ c.	$ c.
Nipissing district	28,784.98	24.50	234,628.13	1,489,018.35	1,723,670.98
Sudbury district	1,040,331.52	52,664.08	933,796.70	3,205,797.19	4,192,257.97
Abitibi district	897,384.49	166,505.00	6,167,871.24	21,663,946.93	27,998,323.17
Patricia district	292,205.82	167,056.13	....	1,193,096.32	1,360,152.45
St. Joseph district	5,149.07	151.54	33,459.55	681,000.78	714,611.87
Kenogami river: Long Lac diversion	682,095.35	591,524.65	429,728.79	....	1,021,253.44
	2,945,951.23	977,925.90	7,799,484.41	28,232,859.57	37,010,269.88

NORTHERN ONTARIO PROPERTIES

Embracing the Nipissing, Sudbury, Abitibi, Patricia (Ear Falls) and St. Joseph Districts

Held and Operated by The Hydro-Electric Power Commission of Ontario In Trust for The Province of Ontario

Reserve for Depreciation and Obsolescence—October 31, 1938

Total provision for depreciation and obsolescence		$1,500,519.57	
Deduct expenditures to October 31, 1937		74,945.92	
Amount of reserves at October 31, 1937		$1,425,573.65	
Added during the year ended October 31, 1938	$307,021.57		
Reserve provided in respect of equipment transferred	90.79		
Interest at 4 per cent per annum on monthly balances at the credit of the account	56,976.06		
		364,088.42	
		$1,789,662.07	
Deduct expenditures during the year ended October 31, 1938		33,719.32	
Balance carried forward October 31, 1938			$1,755,942.75

Reserve for Contingencies—October 31, 1938

Amount of reserves to October 31, 1937		$ 280,591.65	
Additional provision in the period ended October 31, 1937		286,986.21	
		$567,577.86	
Added during the year ended October 31, 1938	$ 76,101.45		
Interest at 4 per cent per annum on monthly balances at the credit of the account	22,677.88		
		98,779.33	
		$ 666,357.19	
Deduct:			
Contingencies met with during the year ended October 31, 1938		56,277.94	
Balance carried forward October 31, 1938			$ 610,079.25

Reserve for Sinking Fund—October 31, 1938

Total provision for sinking fund to October 31, 1937		$1,638,723.98	
Provided in the year ended October 31, 1938	$962,438.79		
Interest at 4 per cent per annum on the monthly balances at the credit of the account	65,488.95		
		1,027,927.74	
		$2,666,651.72	
Deduct:			
Cancellation of amount set up in respect of McMillan Gold Mines transmission line		1,500.30	
Balance carried forward October 31, 1938			$2,665,151.42

THE HAMILTON STREET RAILWAY COMPANY

(A Subsidiary of The Hydro-Electric Power Commission of Ontario—
Niagara System)

FINANCIAL ACCOUNTS

For the Year ended October 31, 1938

Balance Sheet as at October 31, 1938

Operating and Income Accounts for the Year ended October 31, 1938

THE HAMILTON STREET

(A Subsidiary of The Hydro-Electric Power

Balance Sheet as at

ASSETS

Fixed Assets:		
Properties, Road and Equipment, Buses, Franchise, etc.		$4,202,412.41
Current Assets:		
Cash in Bank	$ 86,984.54	
Conductors' and Employees' Advances	12,000.00	
Hydro-Electric Power Commission of Ontario—Current Account	165,992.88	
Accounts receivable	2,865.95	
Prepayments	5,378.54	
		273,221.91
Materials and Supplies		41,728.70
		$4,517,363.02

RAILWAY COMPANY

Commission of Ontario—Niagara System)

October 31, 1938

LIABILITIES

Capital Stock:		
Authorized—80,000 shares at a par value of $50.00 each	$4,000,000.00	
Issued—64,100 shares at a par value of $50.00 each		$3,205,000.00
Current Liabilities:		
Accounts payable		20,387.40
Reserves:		
Depreciation—Road and equipment	1,189,799.37	
Insurance	56,470.74	
Miscellaneous	31,712.87	
		1,277,982.98
Surplus		13,992.64
		$4,517,363.02

Auditors' Certificate

We have examined the Accounts of The Hamilton Street Railway Company for the year ended the 31st October, 1938, and report that, subject to the comments contained in our Annual Report on the Accounts of The Hydro-Electric Power Commission of Ontario, in our opinion the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs at the 31st October, 1938, according to the best of our information and the explanations given to us and as shown by the books of the Company. We have obtained all the information and explanations we have required.

Oscar Hudson and Co.,
Chartered Accountants,
Auditors.

Dated at Toronto, Ontario,
31st March, 1939

THE HAMILTON STREET RAILWAY COMPANY

(A Subsidiary of The Hydro-Electric Power Commission of Ontario—Niagara System)

Operating Statement for the Year Ended October 31, 1938

	Tramways	Buses	Total
	$ c.	$ c.	$ c.
REVENUES:			
Transportation	840,588.22	231,602.22	1,072,190.44
Other operations	4,853.75	824.76	5,678.51
	845,441.97	232,426.98	1,077,868.95
EXPENSES:			
Maintenance of way and structures	63,776.04	....	63,776.04
Maintenance of equipment	70,083.77	42,583.00	112,666.77
Power purchased	115,157.02	....	115,157.02
Transportation expenses	255,628.79	114,830.68	370,459.47
Traffic expenses	942.00	....	942.00
General and miscellaneous expenses	73,795.72	11,516.83	85,312.55
Depreciation provision	100,000.00	6,632.04	106,632.04
Taxes (Municipal and Franchise)	56,119.15	11,217.07	67,336.22
	735,502.49	186,779.62	922,282.11
NET REVENUE FOR YEAR	109,939.48	45,647.36	155,586.84

SURPLUS ACCOUNT AS AT OCTOBER 31, 1938		
Balance at debit October 31, 1937	18,624.74	....
Net Revenue for year ended October 31, 1938	....	155,586.84
Dividend	122,969.46	....
Balance at Credit October 31, 1938	13,992.64	....
	155,586.84	155,586.84

GUELPH RADIAL RAILWAY

(Operated by The Hydro-Electric Power Commission of Ontario)

FINANCIAL ACCOUNTS

For the Year ended October 31, 1938

Balance Sheet as at October 31, 1938

Operating and Income Accounts for the Year ended October 31, 1938

GUELPH RADIAL

(Operated by The Hydro-Electric

Balance Sheet as at

ASSETS

FIXED ASSETS:		
Road and equipment		$453,433.33
CURRENT ASSETS:		
Cash in banks	$ 20,976.31	
Employees' Working Funds	850.00	
Accounts receivable	730.70	
Interest accrued	1,416.27	
Prepayments	813.36	
		24,786.64
MATERIALS AND SUPPLIES		3,004.20
RESERVE FUND INVESTMENTS		81,760.27
		$562,984.44

RAILWAY

Power Commission of Ontario)

October 31, 1938

LIABILITIES

FUNDED DEBT:			
5% Hydro-Radial debentures due November 1, 1970 (Issued for extensions and betterments, secured by $300,000.00 5% City of Guelph debentures due May 1, 1971)			$300,000.00
THE CORPORATION OF THE CITY OF GUELPH:			
Purchase price of the Railway as per Purchase Agreement dated December 8, 1920		$150,000.00	
Less:—Thirty-five instalments paid thereon to date		129,667.25	
			20,332.75
CURRENT LIABILITIES:			
Accounts and Payrolls payable		3,380.68	
Overpayment of Deficit—City of Guelph. Amount received from the City of Guelph	$38,084.76		
Less:—Loss for year ended October 31, 1938	33,605.32		
		4,479.44	
			7,860.12
UNAMORTIZED PREMIUM ON FUNDED DEBT			19,991.73
RESERVES:			
Depreciation—Road and equipment		55,178.77	
Miscellaneous		2,924.60	
Sinking Fund		27,029.22	
Principal instalments paid to the City of Guelph out of revenue		129,667.25	
			214,799.84
			$562,984.44

Auditors' Certificate

We have examined the Accounts of the Guelph Radial Railway for the year ended the 31st October, 1938, and report that, subject to the final adjustment for abandoned Street Railway Equipment and to the adequacy of the Reserve for Depreciation, in our opinion, the above Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Railway's affairs at the 31st October, 1938, according to the best of our information and the explanations given to us and as shown by the books of the Railway. We have obtained all the information and explanations we have required.

OSCAR HUDSON AND CO.,
Chartered Accountants,
Auditors.

Dated at Toronto, Ontario,
31st March, 1939

GUELPH RADIAL RAILWAY

(Operated by The Hydro-Electric Power Commission of Ontario)

Operating Statement for the year ended October 31, 1938

	Freight	Buses	Total
	$ c.	$ c.	$ c.
REVENUES:			
Transportation	8,849.51	53,624.71	62,474.22
Other Operations	266.64	450.86	717.50
	9,116.15	54,075.57	63,191.72
EXPENSES:			
Maintenance of Way and Structures	1,379.95	....	1,379.95
Maintenance of Equipment	730.50	5,792.21	6,522.71
Power Purchased	4,060.15	....	4,060.15
Transportation Expenses	1,956.80	35,260.78	37,217.58
General and Miscellaneous	1,864.67	8,565.11	10,429.78
Depreciation provision	1,247.87	9,383.22	10,631.09
Taxes (Municipal)	61.64	184.91	246.55
	11,301.58	59,186.23	70,487.81
NET OPERATING LOSS	2,185.43	5,110.66	7,296.09

NET OPERATING LOSS AS ABOVE	....	7,296.09	....
NET INTEREST CHARGES	....	12,332.78	....
PROVISION FOR SINKING FUND	....	3,159.00	....
PROVISION FOR INSTALMENTS UNDER PURCHASE AGREEMENTS:			
Principal	10,431.65	....	....
Interest	1,268.35	....	....
		11,700.00	....
ADJUSTMENT OF MISCELLANEOUS RESERVES—NOT REQUIRED	....	....	882.55
LOSS FOR YEAR CHARGED TO THE CITY OF GUELPH	....	....	33,605.32
		34,487.87	34,487.87

SECTION X

MUNICIPAL ACCOUNTS

and

Statistical Data Relating to Hydro-Electric Distribution Systems Operated by Individual Municipalities Served by The Hydro-Electric Power Commission of Ontario

The Municipal Accounts section of this report presents in summary, and individually, the results of the operation of the local electrical utilities in municipalities owning their own distributing systems and operating with energy supplied by or through The Hydro-Electric Power Commission.

Financial statements prepared from the books of these "Hydro" utilities are submitted herein to show how each has operated during the past year, and its financial status at the present time. Other tables give useful statistical information respecting average costs for the various classes of service and the rates in force.

The books of account of the electrical utilities in all municipalities which have contracted with The Hydro-Electric Power Commission of Ontario for a supply of power are kept in accordance with an accounting system designed by the Commission. During the year 1938, this standard method of accounting was installed in Delhi.

Periodical inspections are made of the books of all "Hydro" electrical utilities and local officials are assisted in the improvement of their office routine with a view to standardizing, as far as possible, the methods employed. In the majority of the smaller municipalities much of the book-keeping for the electrical utilities is performed by representatives of the municipal accounting department of the Commission as a measure of economy. This arrangement insures the correct application of the standard accounting system, with resultant uniformity in classification of revenues and expenditures; secures true reflections of the actual operating results for the year, and greatly enhances the comparative values of the reports.

The first financial statement in this section presents consolidated balance sheets for each year since 1913, and thus shows the march of progress. It combines the balance sheets of the local municipal utilities of all the systems. It is worth noting that the total plant value has increased from $10,081,469.16 in 1913 to $98,101,256.69 in 1938, and the total assets from $11,907,826.86

to $166,307,613.91. The liabilities have not increased in the same proportion as the assets, rising from $10,468,351.79 to a maximum of $52,685,316.86 in 1932, and receding to $36,551,688.61 in 1938. The reasons for this are the regular fulfilment of debt retirement schedules under serial debenture provisions or by maturity of sinking funds, and also the fact that much of the cost of the increasing plant value has been financed out of reserves and surplus without increasing the capital liabilities of the respective utilities. By this procedure the funds of the systems are used to best advantage. Examination of the results will also show that there is a steady decline in the percentage of net liabilities to total assets; being from 88.0 per cent in 1913 to 22.4 per cent in 1938. The equities in The Hydro-Electric Power Commission's systems automatically acquired through the inclusion of sinking funds as part of the cost of power are not taken into account in arriving at these percentages.

The second financial statement presents consolidated operating reports for each year since "Hydro" service was inaugurated and combines the results from the local municipal utilities of all the systems. After providing for every cost of operation and fixed charges, including the standard provision for depreciation, the combined operating reports show a net surplus of $1,045,368.48 for 1938. (See also diagrams in Foreword to Report.)

The five statements, "A" to "E", following the two consolidated reports show the financial status of each municipal utility and the results of operations, giving classified information respecting revenue, operating costs, number of consumers and consumption, cost of power to municipalities, power and lighting rates charged to consumers, etc. In statements "A" and "B", the municipalities are arranged alphabetically under each system; in statement "D" the municipalities are arranged in three groups—cities, towns and small municipalities; in statements "C" and "E" all municipalities are arranged alphabetically.

Statement "A" presents the balance sheet of each electrical utility. The plant values are shown under the general subdivisions specified in the standard accounting system and the other items on the positive side of the ledger which are included in total assets are self-explanatory with the exception, perhaps, of the item entitled "equity in H-E.P.C. systems." The sinking fund portion of the cost paid year by year to the Commission for power is for the purpose of ultimately retiring the capital liabilities incurred by the Commission on behalf of the municipalities. A municipality's aggregate equity in the Commission's systems at any time is the total of the sinking fund payments that have been credited to it, together with interest. The total sinking fund equity acquired by these municipalities to the end of 1938 is shown in the consolidated balance sheet to be $44,254,118.64.

In conformity with a policy of service at cost to the customer, refunds by cash or credit were made during the year in many municipalities from surplus funds accrued to the credit of municipal services, such as street lighting, water works, sewage disposal, etc., and to individual customers. The amounts of the accumulated surplus rebated equalled, in different municipalities, from five per cent to twenty per cent of the previous year's revenue. The total thus returned to customers during the year 1938 amounted in round figures to $520,000.00.

In each case the balance sheet includes the credit or charge representing the difference between the monthly payments for power at interim rates and the cost of power as ascertained by the Commission upon annual adjustment.

The reserves for depreciation, and the acquired equity in The Hydro-Electric Power Commission's systems, are listed individually and totalled; and under the heading "surplus" are included not only the free operating surplus but the accumulation of sinking fund applicable to debenture debt and also the amount of debentures already retired out of revenue.

The depreciation reserve now amounts to 26.5 per cent of the total depreciable plant, while the depreciation reserve and surplus combined have already reached the sum of $82,687,021.58, approximately 84.3 per cent of the total plant cost.

Statement "B" shows detailed operating reports for each municipal electrical utility. It gives annual revenues from the various classes of consumers; the items of expenditure which make up the total annual expenditure and the sums set aside for depreciation. The population served by each local utility and the number of consumers of each class are also shown.

The item "power purchased" in this statement includes the debit or credit balances ascertained by the annual adjustment of the cost of power supplied to the municipalities by the Commission.

Of the 288 municipal electric utilities included in this statement, 254 received from consumers revenue sufficient to meet in full all operating expenses, interest, debt retirement instalments, and standard depreciation reserve allocation and to yield an aggregate net surplus of $1,088,284.09 for the year; 29 were able to defray out of revenue all such charges except a portion of the standard depreciation allocation aggregating $39,006.61, in the case of five utilities the revenue was less than the total operating expenses, interest and debt retirement instalments by $1,472.69.

Statement "C" shows the installation of street lights in each municipality together with the rates approved by this Commission, the revenue for 1938, and the cost per capita in each municipality.

Statement "D" presents statistics relating to the supply of electrical energy to consumers in Ontario municipalities served by the Commission. It shows the revenue, kilowatt-hour consumption, number of consumers, average monthly consumption, average monthly bill and the net average cost per kilowatt-hour both for domestic and for commercial light service in each municipality. For power service this statement shows the revenue, the number of consumers and the average horsepower supplied by the municipal utility.* For further reference to this informative statement, consult the special introduction to it on page 378.

Statement "E" presents the cost per horsepower of the power provided for and delivered to the municipalities by the Commission, and the local rates to consumers in force in the respective municipalities, during the year 1938, for domestic service, for commercial light service and for power service.

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*The statistics include retail power only. Wholesale industrial power as supplied by the Commission direct, is reported in Section IX.

CONSOLIDATED

YEAR	1913	1914	1915
Number of municipalities included	45	69	99
ASSETS	$ c.	$ c.	$ c.
Lands and buildings	626,707.34	791,732.20	873,838.18
Substation equipment	1,090,875.69	1,476,087.84	1,582,062.56
Distribution system—overhead	2,690,834.74	3,422,763.93	4,234,626.05
Distribution system—underground	644,514.24	807,153.53	928,420.77
Line transformers	615,546.20	787,613.52	981,754.70
Meters	840,606.64	1,172,475.11	1,418,165.08
Street lighting equipment—regular	900,614.80	1,071,255.37	1,309,628.49
Street lighting equipment—ornamental	62,765.34	270,386.55	197,644.82
Miscellaneous construction expenses	866,551.89	2,062,035.90	1,701,182.66
Steam or hydraulic plant	1,401,175.28	420,108.33	461,651.60
Old plant	341,277.00	619,513.12	1,184,372.86
Total plant	10,081,469.16	12,901,125.40	14,873,347.77
Bank and cash balance	450,887.97	422,350.12	284,653.96
Securities and investments	....	....	....
Accounts receivable	344,487.95	561,873.08	602,920.69
Inventories	540,274.58	615,226.76	726,556.76
Sinking fund on local debentures	431,747.27	625,217.03	868,983.78
Equity in H-E.P.C. systems	....	....	....
Other assets	58,959.93	123,410.97	326,801.11
Total assets	11,907,826.86	15,249,203.36	17,683,264.07
LIABILITIES			
Debenture balance	8,711,308.37	10,678,078.36	11,831,811.03
Accounts payable	1,553,711.45	1,682,150.29	2,040,038.01
Bank overdraft	160,919.16	228,622.50	292,106.44
Other liabilities	42,412.81	113,838.66	37,388.31
Total liabilities	10,468,351.79	12,702,689.81	14,201,343.79
RESERVES			
For equity in H-E.P.C. systems	....	....	....
For depreciation	478,145.88	850,618.07	1,337,739.73
Other reserves	....	....	....
Total reserves	478,145.88	850,618.07	1,337,739.73
SURPLUS			
Debentures paid	202,751.26	320,129.10	394,466.22
Local sinking fund	431,747.27	625,217.03	868,983.78
Operating surplus	326,830.66	750,549.35	880,730.55
Total surplus	961,329.19	1,695,895.48	2,144,180.55
Total liabilities, reserves and surplus	11,907,826.86	15,249,203.36	17,683,264.07
Percentage of net debt to total assets	88.0	88.3	80.3

NOTE—In computing the "percentage of net debt to total assets" the ornamental street lighting capital, sinking fund on local debentures, and equity in H-E.P.C. systems, are excluded

BALANCE SHEET

1916	1917	1918	1919	1920	1921
128	143	166	191	195	215
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,335,936.33	1,546,241.41	1,859,888.69	1,995,545.83	2,175,568.24	3,230,985.63
1,934,626.12	2,471,293.82	2,820,488.70	2,915,125.56	3,231,050.80	5,403,689.90
4,832,353.27	6,090,073.42	6,627,237.39	7,445,820.31	8,579,881.49	8,397,361.48
1,095,709.62	1,157,059.90	1,216,288.59	1,206,296.88	1,313,369.29	1,401,135.97
1,179,132.07	1,483,839.44	1,772,691.35	2,073,113.45	2,560,581.59	3,077,649.83
1,711,299.49	1,999,095.48	2,238,143.70	2,587,566.32	3,053,135.20	3,552,076.79
1,251,057.13	1,237,734.69	1,200,625.65	1,206,638.71	1,269,006.98	1,335,997.13
306,388.95	361,975.74	531,502.61	546,497.68	557,678.13	610,586.70
2,059,263.42	2,184,015.84	2,395,096.50	2,530,101.08	2,697,636.12	3,030,134.16
864,500.01	896,753.20	214,575.75	986,200.57	757,194.47	704,848.46
759,748.66	649,852.51	1,476,413.00	805,959.89	864,298.39	912,388.55
17,330,015.07	20,077,935.45	22,352,951.93	24,298,866.28	27,059,400.70	31,656,854.60
1,061,029.90	340,026.50	391,194.91	462,437.23	943,858.12	900,842.34
....	....	....	627,076.53	341,855.88	477,678.69
695,152.23	1,285,097.33	1,124,018.44	1,921,166.69	2,022,538.88	2,155,788.62
764,504.59	1,261,398.36	972,996.96	1,032,569.75	1,400,671.89	1,504,596.28
1,166,017.73	1,337,578.96	1,663,298.05	1,925,455.77	2,244,004.34	2,541,718.35
....	....	....	369,071.89	577,584.06	795,570.51
342,215.87	125,240.05	444,787.63	86,216.05	25,447.07	78,929.84
21,358,935.39	24,427,276.65	26,949,247.92	30,722,860.19	34,615,360.94	40,111,979.23
15,058,641.57	15,593,773.61	17,209,217.70	18,133,462.44	19,268,072.04	21,619,220.99
969,187.75	1,537,669.11	1,007,727.79	1,420,926.66	1,840,137.54	1,887,567.93
178,413.26	886,177.94	576,816.49	403,235.57	514,671.99	989,099.98
491,874.90	429,104.20	350,013.21	670,271.90	642,293.65	938,368.84
16,698,117.48	18,446,724.86	19,143,775.19	20,627,896.57	22,265,175.22	25,434,257.74
....	....	....	373,871.89	577,584.06	800,249.05
1,843,804.68	2,463,723.83	3,133,550.17	3,750,162.28	4,788,645.03	5,491,858.93
....	....	....	....	....	....
1,843,804.68	2,463,723.83	3,133,550.17	4,124,034.17	5,366,229.09	6,292,107.98
549,778.59	694,797.90	920,076.56	1,328,657.68	1,440,156.52	1,860,079.53
1,165,785.94	1,340,615.38	1,662,602.69	1,754,020.37	2,246,474.47	2,541,718.35
1,101,448.70	1,481,414.68	2,089,243.31	2,888,251.40	3,297,325.64	3,983,815.63
2,817,013.23	3,516,827.96	4,671,922.56	5,970,929.45	6,983,956.63	8,385,613.51
21,358,935.39	24,427,276.65	26,949,247.92	30,722,860.19	34,615,360.94	40,111,979.23
78.4	75.5	71.0	67.9	65.4	64.7

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from assets; and the total liabilities are reduced by the amount of the local sinking fund reserve, and the liability in respect to the ornamental street lighting capital, which amount is included in other liabilities.

CONSOLIDATED

YEAR	1922	1923	1924
Number of municipalities included	226	235	248
ASSETS	$ c.	$ c.	$ c.
Lands and buildings	3,334,522.68	4,488,054.93	4,561,648.92
Substation equipment	5,046,857.98	6,015,919.75	6,800,238.00
Distribution system—overhead	11,165,330.24	13,135,581.76	14,182,190.33
Distribution system—underground	1,598,053.02	1,959,120.41	2,873,446.13
Line transformers	3,618,684.73	4,211,655.89	4,456,669.02
Meters	4,033,689.52	4,548,933.73	5,149,629.71
Street lighting equipment—regular	1,419,016.05	1,061,473.85	1,134,491.77
Street lighting equipment—ornamental	666,084.50	708,431.22	728,298.08
Miscellaneous construction expenses	3,261,495.74	3,681,274.88	4,168,262.21
Steam or hydraulic plant	565,158.54	566,619.86	4,196,803.45
Old plant	7,997,947.87	8,051,496.28	5,587,420.31
Total plant	42,706,840.87	48,428,562.56	53,839,097.93
Bank and cash balance	1,164,336.24	1,276,140.06	1,748,912.34
Securities and investments	443,938.18	1,153,424.47	1,329,622.58
Accounts receivable	3,874,317.14	3,198,769.34	3,898,751.89
Inventories	1,738,795.96	1,819,711.62	1,745,628.16
Sinking fund on local debentures	3,416,231.45	3,896,261.28	4,520,723.06
Equity in H-E.P.C. systems	1,543,434.12	2,929,603.94	5,420,567.58
Other assets	238,940.13	190,071.63	250,292.77
Total assets	55,126,834.09	62,892,544.90	72,753,596.31
LIABILITIES			
Debenture balance	30,454,186.12	33,056,501.29	38,005,162.50
Accounts payable	3,699,292.52	3,708,781.76	3,117,224.08
Bank overdraft	456,706.69	680,714.59	162,100.71
Other liabilities	586,203.02	1,517,828.47	1,780,564.27
Total liabilities	35,196,388.35	38,963,826.11	43,065,051.56
RESERVES			
For equity in H-E.P.C. systems	1,543,434.12	2,929,603.94	5,420,567.58
For depreciation	6,512,813.92	7,328,858.69	8,097,834.68
Other reserves	....	....	....
Total reserves	8,056,248.04	10,258,462.63	13,518,402.26
SURPLUS			
Debentures paid	3,104,591.15	2,852,038.38	3,530,610.35
Local sinking fund	3,416,231.45	3,896,261.28	4,520,723.06
Operating surplus	5,353,375.10	6,921,956.50	8,118,809.08
Total surplus	11,874,197.70	13,670,256.16	16,170,142.49
Total liabilities, reserves and surplus	55,126,834.09	62,892,544.90	72,753,596.31
Percentage of net debt to total assets	63.3	62.6	61.4

BALANCE SHEET—Continued

1925	1926	1927	1928	1929
247	251	252	256	260
$ c.	$ c.	$ c.	$ c.	$ c.
5,768,855.99	6,111,162.54	6,486,426.89	7,024,646.76	7,469,451.46
8,543,166.55	9,505,501.77	15,088,905.14	16,866,186.21	18,102,792.13
16,837,535.57	18,654,240.54	16,689,462.41	17,688,050.68	18,108,016.82
3,388,837.09	3,689,569.95	3,278,382.58	3,559,288.16	4,823,369.60
5,079,754.23	5,538,605.24	5,985,521.37	6,549,674.64	7,312,742.17
5,533,483.92	5,963,162.51	6,346,660.59	6,839,802.90	7,405,478.91
1,256,916.53	1,309,608.30	1,399,314.06	1,486,646.24	1,594,183.25
893,186.48	1,103,660.23	1,184,035.82	1,203,706.65	1,458,349.64
4,485,110.96	3,456,777.71	3,360,671.09	3,394,626.92	3,483,487.78
568,912.49	628,909.57	607,320.00	619,880.93	489,097.57
4,549,142.46	4,655,422.59	5,095,555.90	5,032,089.26	5,093,378.75
56,904,902.27	60,616,620.95	65,522,255.85	70,264,599.35	75,340,348.08
1,700,145.30	2,136,290.79	3,014,832.48	1,342,367.07	858,733.68
1,095,662.92	1,400,316.43	1,696,237.66	1,837,140.51	2,001,088.81
3,417,558.86	3,508,817.87	3,715,770.72	4,097,446.13	4,683,201.97
1,711,504.13	1,397,667.83	1,412,729.41	1,220,186.10	1,365,033.58
5,202,451.70	5,599,675.01	6,398,909.77	7,071,273.69	7,753,613.88
7,551,588.70	8,046,868.53	10,143,205.66	12,326,097.56	14,754,865.40
137,280.05	33,151.81	31,942.45	153,275.04	152,260.86
77,721,093.93	82,739,409.22	91,935,884.00	98.312,385.45	106,909,146.26
37,919,225.01	39,602,533.48	42,891,361.57	42,597,175.78	42,930,127.74
3,139,067.92	3,118,684.78	2,988,621.90	3,074,634.25	3,132,145.03
226,147.82	163,725.53	252,362.52	253,143.81	412,056.69
1,075,914.83	1,087,795.08	1,154,810.24	1,258,610.23	1,621,378.17
42,360,355.58	43,972,738.87	47,287,156.23	47,183,564.07	48,095,707.63
7,551,588.70	8,046,868.53	10,143,205.66	12,326,097.56	14,754,865.40
8,699,437.68	9,360,322.27	10,319,889.05	11,140,795.68	11,911,154.49
1,157,147.20	947,970.23	1,002,916.69	1,117,257.63	1,437,371.26
17,408,173.58	18,355,161.03	21,466,011.40	24,584,150.87	28.103,391.15
4,440,138.34	5,493,879.83	6,648,767.38	7,928,907.61	9,194,253.59
5,202,451.70	5,599,675.01	6,398,909.77	7,071,273.69	7,962,121.20
8,309,974.73	9,317,954.48	10,135,039.22	11,544,489.21	13,553,672.69
17,952,564.77	20,411,509.32	23,182,716.37	26,544,670.51	30,710,047.48
77,721,093.93	82,739,409.22	91,935,884.00	98,312,385.45	106,909,146.26
57.2	55.5	54.2	50.8	47.8

CONSOLIDATED

YEAR	1930	1931	1932
Number of municipalities included	267	275	280
ASSETS	$ c.	$ c.	$ c.
Lands and buildings	7,936,974.31	8,407,664.48	9,503,743.78
Substation equipment	19,485,056.28	21,013,956.74	22,288,781.68
Distribution system—overhead	19,220,326.48	19,918,355.76	20,866,767.32
Distribution system—underground	4,932,189.05	5,361,627.24	5,820,056.75
Line transformers	7,953,090.23	8,649,875.07	9,392,662.62
Meters	7,840,948.07	8,106,202.88	8,403,251.67
Street lighting equipment—regular	1,780,785.67	2,205,613.18	2,257,618.20
Street lighting equipment—ornamental	1,520,891.01	1,456,742.91	1,545,354.93
Miscellaneous construction expenses	3,996,747.77	3,827,132.05	4,120,926.11
Steam or hydraulic plant	139,587.28	458,374.05	498,231.69
Old plant	5,322,690.14	7,146,437.96	4,989,654.97
Other plants not distributed	....	....	200,000.00
Total plant	80,129,286.29	86,551,982.32	89,887,049.72
Bank and cash balance	2,722,250.12	2,738,319.67	3,185,442.00
Securities and investments	1,909,439.11	1,999,846.42	2,059,325.10
Accounts receivable	4,481,006.92	3,957,972.78	3,683,059.42
Inventories	1,242,994.51	1,276,531.01	1,232,209.52
Sinking fund on local debentures	8,396,255.47	8,735,050.84	9,099,210.61
Equity in H-E.P.C. systems	17,346,372.44	20,103,275.76	23,066,129.81
Other assets	173,030.05	174,879.28	163,637.79
Total assets	116,400,634.91	125,537,858.08	132,376,063.97
LIABILITIES			
Debenture balance	45,091,808.06	44,594,400.03	45,133,305.97
Accounts payable	3,001,186.21	5,382,306.13	3,512,724.58
Bank overdraft	405,663.14	312,575.54	298,910.20
Other liabilities	1,642,771.59	1,909,986.13	3,740,376.11
Total liabilities	50,141,429.00	52,199,267.83	52,685,316.86
RESERVES			
For equity in H-E.P.C. systems	17,346,372.44	20,103,275.76	23,066,129.81
For depreciation	12,885,387.51	13,748,049.68	14,902,177.02
Other reserves	1,574,655.74	1,693,129.83	1,902,308.64
Total reserves	31,806,415.69	35,544,455.27	39,870,615.47
SURPLUS			
Debentures paid	10,728,279.15	13,150,040.37	15,244,778.28
Local sinking fund	8,396,255.47	8,735,050.84	9,099,210.61
Operating surplus	15,328,255.60	15,909,043.77	15,476,142.75
Total surplus	34,452,790.22	37,794,134.98	39,820,131.64
Total liabilities, reserves and surplus	116,400,634.91	125,537,858.08	132,376,063.97
Percentage of net debt to total assets	46.0	44.1	43.4

BALANCE SHEET—Concluded

1933	1934	1935	1936	1937	1938
282	282	284	283	287	288
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
10,186,471.28	10,262,692.98	10,381,191.41	10,528,595.34	10,785,473.59	10,894,019.12
22.306,800.94	22,327,618.75	22,072,115.14	22,162,208.03	22,900,269.21	23,614,597.80
21,152,681.20	21,353,725.80	21,650,567.75	22,163,701.17	22,699,652.43	23,371,092.61
5,945,225.61	6,031,767.74	6,068,724.47	6,070,337.02	6,100,282.76	6,134,283.64
9,478,605.14	9,635,279.35	9,678,578.13	9,845,939.94	10,128,591.29	10,494,789.40
8,514,165.03	8,624,504.78	8,767,892.27	9,043,615.65	9,234,773.90	9,539,413.66
2,381,599.40	2,395,296.48	2,420,238.81	2,527,188.03	2,610,137.97	2,697,047.84
1,458,443.68	1,464,306.73	1,486,302.46	1,504,596.77	1,508,564.76	1,516,059.81
4,040,859.74	3,907,359.92	3,616,986.74	4,019,430.59	4,389,592.08	4,444,880.40
502,978.62	494,932.96	496,050.14	496,186.33	496,186.33	497,974.74
5,016,755.92	4,978,079.44	4,917,917.43	4,876,405.43	4,878,609.01	4,897,097.67
200,000.00	200,000.00	200,000.00	200,000.00	....	....
91,184,586.56	91,675,564.93	91,756,564.75	93,438,204.30	95,732,133.33	98,101,256.69
1,696,489.24	2,215,914.31	2,927,485.90	3,921,121.28	3,080,864.13	3,043,609.87
2,163,785.20	2,382,446.41	2,593,633.59	2,924,913.30	4,469,369.04	4,832,322.57
3,746,910.92	4,001,596.09	4,363,297.95	4,560,713.55	4,240,741.41	4,106,655.16
1,226,043.30	1,110,705.38	1,212,063.37	1,261,843.81	1,336,527.60	1,393,158.18
9,386,176.58	9,161,419.77	9,086,152.46	9,535,712.83	10,003,873.93	10,397,958.20
26,045,679.00	29,274,340.46	32,609,979.83	36.193,874.21	40,032,438.34	44,254,118.64
253,581.84	289,158.19	301,317.86	203,167.35	186,252.23	178,534.60
135,703,252.64	140,111,145.54	144,850,495.71	152,039,550.63	159,082,200.01	166,307,613.91
42,606,145.29	39,646,989.68	36,667,080.62	34,485,507.43	32,447,411.68	29,987,512.34
3,320,485.45	3,149,035.07	2,931,934.14	2,879,497.45	2,912,960.24	3,334,802.82
206,398.00	143,556.95	72,084.93	25,559.95	34,787.51	108,753.61
3,787,725.14	3,669,008.56	3,462,906.61	3,267,141.59	3,216,028.08	3,120,619.84
49,920,753.88	46,608,590.26	43,134,006.30	40,657,706.42	38,611,187.51	36,551,688.61
26,045.679.00	29,274,340.46	32,609,979.83	36,193,874.21	40,032,438.34	44,254,118.64
16,075,959.28	17,426,809.32	18,410,891.84	19,666,170.18	21,034,164.68	22,583,476.69
2,048,081.84	2,056,820.81	2,459,074.98	2,763,100.40	2,802,650.84	2,814,785.08
44,169,720.12	48,757,970.59	53,479,946.65	58,623,144.79	63,869,253.86	69,652,380.41
17,651,367.71	20,608,129.73	23,481,974.13	26,084,294.84	28,468,539.78	30,890,189.93
9,386,176.58	9,161,419.77	9,086,152.46	9,535,712.83	10,003,873.93	10,397,958.20
14,575,234.35	14,975,035.19	15,668,416.17	17,138,691.75	18,129,344.93	18,815,396.76
41,612,778.64	44,744,584.69	48,236,542.76	52,758,699.42	56,601,758.64	60,103,544.89
135,703,252.64	140,111,145.54	144,850,495.71	152,039,550.63	159,082,200.01	166,307,613.91
40.4	35.9	32.0	28.3	25.2	22.4

CONSOLIDATED

YEAR	1912	1913	1914	1915
Number of municipalities included	28	45	69	99
EARNINGS	$ c.	$ c.	$ c.	$ c.
Domestic service		572,154.38	789,130.81	944,271.08
Commercial light service		525,438.16	673,803.92	720,209.26
Commercial power service		905,378.17	1,214,829.31	1,501,797.78
Municipal power				
Street lighting		560,925.56	698,409.71	835,970.87
Rural service				
Miscellaneous		53,543.24	57,482.41	68,046.29
Total earnings	1,617,674.00	2,617,439.51	3,433,656.16	4,070,295.28
EXPENSES				
Power purchased		789,632.87	1,045,752.65	1,484,666.00
Substation operation		78,394.81	97,658.90	107,607.31
Substation maintenance		18,698.46	31,790.99	25,935.56
Distribution system, operation and maintenance		104,114.51	130,998.65	154,409.71
Line transformer maintenance		8,547.61	11,764.32	11,508.92
Meter maintenance		5,222.19	9,536.07	12,899.14
Consumers' premises expenses		53,108.38	65,192.23	47,494.26
Street lighting, operation and maintenance		84,903.76	113,047.80	136,983.38
Promotion of business		72,303.51	86,683.02	74,402.55
Billing and collecting		77,351.76	103,560.71	131,541.27
General office, salaries and expenses		154,932.69	230,899.75	236,777.86
Undistributed expense		65,423.64	89,350.91	129,209.15
Interest		528,549.21	662,092.34	817,978.89
Sinking fund and principal payments on debentures		*	*	*
Total expenses	1,377,168.00	2,041,183.40	2,678,328.34	3,371,414.00
Surplus	240,506.00	576,256.11	755,327.82	698,881.28
Depreciation and other reserves	124,992.47	262,675.24	357,883.31	414,506.99
Surplus less depreciation	115,513.53	313,580.87	397,444.51	284,374.29

*Debenture payments included in "Interest."

OPERATING REPORT

1916	1917	1918	1919	1920	1921
128	143	166	181	186	205
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,172,878.96	1,417,460.31	1,632,272.12	1,991,632.31	2,546,345.30	3,149,080.03
812,130.78	899,023.72	968,399.42	1,175,143.56	1,512,854.63	1,851,501.76
1,921,152.31	2,665,280.65	3,417,248.37	3,443,107.13	3,752,188.22	3,895,437.46
....	....	....	....	532,279.09	654,531.01
930,057.48	967,495.10	902,875.55	988,900.95	1,005,535.11	1,060,357.77
....	....	....	....	168,919.95	145,566.57
147,381.50	120,805.39	161,243.70	228,270.65	189,778.63	225,467.70
4,983,601.03	6,070,065.17	7,082,039.16	7,827,054.60	9,707,900.93	10,981,942.30
1,959,446.83	2,573,879.37	2,807,769.33	3,284,490.68	4,216,667.87	4,876,650.31
153,761.08	203,091.20	238,257.34	217,638.89	285,407.35	314,838.35
46,131.53	42,129.04	60,805.92	81,853.63	102,050.81	104,798.01
154,247.17	169,326.24	223,347.81	286,310.76	344,551.57	487,918.33
14,528.17	25,328.95	30,488.83	42,509.12	46,323.09	65,088.46
24,218.48	44,461.55	63,155.56	78,726.64	123,701.18	116,722.97
52,602.01	61,765.14	65,149.59	84,301.24	116,283.52	134,854.92
145,471.50	157,857.73	196,157.18	215,963.86	236,930.79	297,481.52
79,324.85	73,516.37	64,962.78	74,789.22	78,294.85	101,804.46
154,508.58	188,083.84	208,660.76	236,504.75	295,942.88	321,685.71
306,709.35	349,932.05	421,680.15	452,131.22	559,695.29	656,268.11
97,333.97	102,938.80	117,474.07	190,690.09	256,400.33	308,874.42
951,781.99	1,085,180.80	1,238,425.53	1,285,571.51	1,431,807.16	998,611.47
*	*	*	*	*	532,183.96
4,140,065.51	5,077,491.08	5,736,334.85	6,531,481.61	8,094,056.69	9,317,781.00
843,535.52	992,574.09	1,345,704.31	1,295,572.99	1,613,844.24	1,664,161.30
486,141.80	607,296.29	718,162.30	814,219.37	902,028.75	1,044,434.85
357,393.72	385,277.80	627,542.01	481,353.62	711,815.49	619,726.45

CONSOLIDATED

YEAR	1922	1923	1924
Number of municipalities included	214	224	241
EARNINGS	$ c.	$ c.	$ c.
Domestic service	3,786,608.23	5,166,452.24	5,993,231.07
Commercial light service	2,158,306.34	3,260,772.50	3,566,227.22
Commercial power service	4,383,912.97	5 927 666.37	6 222 865.88
Municipal power	973,263.38	1,161,598.60	1,352,966.47
Street lighting	1,160,446.81	1,269,604.48	1,356,668.97
Rural service	105,877.09	116,639.06	75,100.24
Miscellaneous	187,689.39	316,311.21	231,663.58
Total earnings	12,756,104.21	17,219,044.46	18,798,723.43
EXPENSES			
Power purchased	6,636,853.37	8,699,026.67	9,669,789.40
Substation operation	315,443.70	474,442.13	430,056.09
Substation maintenance	100,763.67	133,815.53	202,050.04
Distribution system, operation and maintenance	519,252.16	636,477.41	648,700.62
Line transformer maintenance	52,932.26	75,920.10	82,936.50
Meter maintenance	107,806.88	139,104.81	141,231.23
Consumers' premises expenses	143,388.88	218,682.02	237,316.20
Street lighting, operation and maintenance	297,363.86	299,579.08	269,973.30
Promotion of business	129,932.63	184,371.00	202,060.74
Billing and collecting	338,153.50	444,306.92	490,273.30
General office, salaries and expenses	605,852.50	937,463.47	889,907.66
Undistributed expense	385,895.03	359,206.91	494,078.50
Truck operation and maintenance	....	....	....
Interest	1,074,657.44	1,615,205.16	1,779,991.26
Sinking fund and principal payments on debentures	635,469.90	990,907.14	1,122,798.87
Total expenses	11,343,765.78	15,208,508.35	16,661,163.71
Surplus	1,412,338.43	2,010,536.11	2,137,559.72
Depreciation and other reserves	715,814.24	916,782.75	973,649.62
Surplus less depreciation	696,524.19	1,093,753.36	1,163,910.10

OPERATING REPORT—Continued

1925	1926	1927	1928	1929
242	248	251	255	259
$ c.	$ c.	$ c.	$ c.	$ c.
6,439,159.86	7,372,602.62	8,189,866.89	8,925,050.56	9,873,681.57
3,866,292.79	4,187,899.19	4,626,815.51	5,182,723.32	5,697,766.06
6,568,854.77	6,789,217.54	7,342,173.20	8,298,669.44	9,376,158.74
1,923,093.09	1,922,512.34	1,913,502.88	1,921,300.97	2,086,444.24
1,415,382.22	1,457,686.21	1,489,242.37	1,534,476.98	1,598,262.43
37,975.18	37,810.73	13,765.72	48,451.90*	51,590.54*
286,451.08	471,134.15	581,913.04	465,791.92	522,780.95
20,537,208.99	22,238,862.78	24,157,279.61	26,376,465.09	29,206,684.53
11,063,123.34	12,185,669.10	13,505,583.77	14,688,570.08	16,379,162.88
417,921.71	450,416.84	430,211.76	420,512.48	461,270.27
207,497.63	286,520.37	275,148.86	247,647.88	274,275.56
686,344.54	795,514.70	758,747.10	736,159.85	907,817.04
75,473.28	74,876.11	94,706.38	88,676.18	93,608.14
156,909.55	189,603.70	214,813.87	218,530.96	242,126.27
252,808.47	275,020.62	285,352.68	291,333 03	314,495.03
275,316.60	295,869.37	318,395.79	329.597.16	359 373.40
217,102.24	234.696.74	220,687.60	249,842.01	250,844.28
521,134.01	557,271.54	605,627.58	638,797.02	695,729.42
891,640.29	786,742.60	824,868.90	844,578.55	904,025.64
520,584.58	460,288.30	531,003.80	542,755.34	502,206.06
....	....	....	....	110,630.62
1,889,810.95	1,985,233.73	2,063,698.00	2,111,049.49	2,152,695.49
1,294,027.29	1,347,511.92	1,505,626.31	1,601,711.32	1,687,201.64
18,469,694.48	19,925,235.64	21,634,472.40	23,009,761.35	25,335,461.74
2,067,514.51	2,313,627.14	2,522,807.21	3,366,703.74	3,871,222.79
1,068,880.42	1,146,273.05	1,249,711.65	1,350,252.16	1,469,846.83
998,634.09	1,167,354.09	1,273,095.56	2,016,451.58	2,401,375.96

*See footnote on page 259.

CONSOLIDATED

YEAR	1930	1931	1932
Number of municipalities included	267	275	280
EARNINGS	$ c.	$ c.	$ c.
Domestic service	10,542.903.89	10,972,952.10	11,447,307.85
Commercial light service	5,961,383.23	6,230,475.89	6,243,794.01
Commercial power service	9,340,653.28	9,456,224.97	9,356,693.88
Municipal power	2,111,482.38	1,967,118.54	1,859,585.35
Street lighting	1,674,528.03	1,746,855.24	1,783,972.46
Merchandise*	28,954.60*	29,446.38*	11,069.27*
Miscellaneous	581,914.78	511,139.80	513,787.30
Total earnings	30,241,820.19	30,914,212.92	31,216,210.12
EXPENSES			
Power purchased	17,323,077.97	18,085,166.51	19,109,036.25
Substation operation	479,502.48	487,484.17	503,351.82
Substation maintenance	320,716.48	303,536.11	300,186.15
Distribution system, operation and maintenance	991,972.86	1,015,256.14	969,750.51
Line transformer maintenance	96,746.35	93,463.24	95,485.55
Meter maintenance	278,379.43	284,633.88	300,104.85
Consumers' premises expenses	317,902.45	363,078.47	368,208.73
Street lighting, operation and maintenance	372,211.07	368,119.49	360,709.76
Promotion of business	249,070.05	255,956.03	266,760.84
Billing and collecting	745,159.02	792,983.99	818,721.33
General office, salaries and expenses	907,226.89	923,676.84	960,558.88
Undistributed expense	523,862.96	520,893.10	436,692.96
Truck operation and maintenance	112,029.82	107,918.93	112,059.90
Interest	2,220,214.45	2,328,094.32	2,532,940.93
Sinking fund and principal payments on debentures	1,828,061.62	2,061,718.79	2,244,367.86
Total expenses	26,766,134.00	27,991,980.01	29,378,936.42
Surplus	3,475,686.19	2,922,232.91	1,837,273.70
Depreciation and other reserves	1,574,991.68	1,775,330.69	1,920,896.22
Surplus less depreciation	1,900,694.51	1,146,902.22	*83,622.52* (loss)

OPERATING REPORT—Concluded

1933	1934	1935	1936	1937	1938
282	282	284	283	287	288
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
11,429,101.13	11,844,033.10	12,145,219.89	12,682,140.18	12,448,345.63	12,607,601.30
6,013,025.96	6,206,086.35	6,458,748.57	6,815,439.16	6,510,685.15	6,727,374.48
9,080,522.07	9,692,784.37	10,211,968.71	10,694,192.44	11,063,764.43	10,527,631.36
1,826,872.07	1,875,969.80	1,821,285.82	1,817,986.94	1,731,311.34	1,677,069.34
1,779,582.48	1,777,596.69	1,788,760.38	1,799,420.87	1,781,363.37	1,813,555.27
12,812.74*	18,747.73*	21,669.98*	23,158.76*	22,971.02*	*26,588.18
485,925.43	555,172.04	562,285.82	575,825.49	607,035.54	602,012.80
30,627,841.88	31,970,390.08	33,009,939.17	34,408,163.84	34,165,476.48	33,981,832.73
19,330,861.58	19,591,887.79	20,053,676.40	20,486,582.65	20,532,736.85	20,575,457.95
484,764.57	468,944.09	478,813.83	478,855.71	490,737.94	493,651.06
288,583.29	296,550.52	297,127.27	301,897.24	300,389.49	351,013.94
895,350.99	844,813.95	830,633.88	855,576.02	889,990.11	921,064.94
82,321.32	75,172.18	70,749.63	72,711.67	81,365.18	94,040.92
283,115.98	291,402.79	313,234.11	328,410.90	343,658.47	384,357.58
361,499.20	352,499.09	340,761.52	306,644.80	420,366.36	483,012.96
353,082.15	338,784.80	340,120.36	356,932.01	364,325.53	373,065.44
259,936.42	228,741.36	252,648.33	288,338.93	294,574.21	309,626.97
817,660.03	827,860.20	835,375.90	945,892.70	980,540.10	987,040.66
908,517.79	908,039.75	943,880.18	967,269.06	940,890.76	931,120.05
349,101.36	362,322.12	360,676.96	448,332.98	476,370.44	430,609.32
105,452.68	98,081.61	95,150.54	69,805.06	77,995.38	84,111.05
2,426,286.35	2,204,994.25	2,040,130.35	1,893,304.28	1,752,287.58	1,642,663.25
2,319,319.09	2,358,169.12	2,423,088.34	2,448,223.80	2,429,565.06	2,424,098.70
29,265,852.80	29,248,263.62	29,686,067.60	30,248,777.81	30,375,793.46	30,484,934.79
1,361,989.08	2,722,126.46	3,323,871.57	4,159,386.03	3,789,683.02	3,496,897.94
1,989,000.41	2,036,637.33	2,076,322.24	2,230,021.86	2,329,625.64	2,451,529.46
627,011.33 (loss)	685,489.13	1,247,549.33	1,929,364.17	1,460,057.38	1,045,368.48

*Profits from the sale of merchandise. Rural service now given in "Rural Power Districts." Consult Section IX.

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA
SYSTEM

Municipality Population	Acton 1,916	Agincourt P.V.	Ailsa Craig 472	Alvinston 650	Amherstburg 2,869
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	1,545.45			133.56	
Substation equipment	1,985.25				932.00
Distribution system—overhead	25,512.17	8,771.91	7,738.40	14,150.91	38,968.90
Distribution system—underground					
Line transformers	11,963.68	4,500.69	1,761.29	3,150.23	19,063.98
Meters	10,908.80	2,728.97	2,568.32	3,164.43	16,975.68
Street light equipment, regular	2,258.64	874.51	446.16	1,090.62	812.44
Street light equipment, ornamental					5,598.72
Miscellaneous construction expense	2,812.97	252.36	492.36	1,025.70	6,593.60
Steam or hydraulic plant					
Old plant				773.85	
Total plant	56,986.96	17,128.44	13,006.53	23,489.30	88,945.32
Bank and cash balance	6,329.71	446.24	6,559.16	2,951.17	4,805.16
Securities and investments	6,500.00	5,000.00	5,000.00	4,500.00	
Accounts receivable	745.18	769.33	1,376.92	679.94	6,474.45
Inventories	1,165.86				
Sinking fund on local debentures					
Equity in H-E.P.C. systems	59,932.14	9,553.28	13,887.33	13,876.34	46,386.99
Other assets	168.50				460.80
Total assets	131,828.35	32,897.29	39,829.94	45,496.75	147,072.72
Deficit				157.17	
Total	131,828.35	32,897.29	39,829.94	45,653.92	147,072.72
LIABILITIES					
Debenture balance				3,133.56	14,481.25
Accounts payable	640.98	130.69		132.20	1,956.07
Bank overdraft					
Other liabilities	873.92		170.00	55.00	7,706.06
Total liabilities	1,514.90	130.69	170.00	3,320.76	24,143.38
RESERVES					
For equity in H-E.P.C. systems	59,932.14	9,553.28	13,887.33	13,876.34	46,386.99
For depreciation	10,362.15	2,206.54	6,801.40	7,986.14	22,077.33
Other reserves				75.00	316.01
Total reserves	70,294.29	11,759.82	20,688.73	21,937.48	68,780.33
SURPLUS					
Debentures paid	14,500.00	8,072.65	6,883.38	20,395.68	17,572.35
Local sinking fund					
Operating surplus	45,519.16	12,934.13	12,087.83		36,576.66
Total surplus	60,019.16	21,006.78	18,971.21	20,395.68	54,149.01
Total liabilities, reserves and surplus	131,828.35	32,897.29	39,829.94	45,653.92	147,072.72
Percentage of net debt to total assets	2.1	0.6	0.7	10.5	19.5

NOTE—In computing the "percentage of net debt to total assets," the ornamental street lighting capital, sinking fund on local debentures, and equity in H-E.P.C. systems, are excluded

"A"

Hydro Municipalities as at December 31, 1938

Ancaster Twp.	Arkona 406	Aylmer 1,998	Ayr 755	Baden P.V.	Beachville P.V.	Beamsville 1,121
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	10,383.52	125.00	660.64	176.13	....
....	....	....	....	....	....	600.00
18,219.90	9,653.76	21,521.81	12,625.70	9,122.26	14,106.51	27,327.41
....	....	....	....	....	....	....
12,055.79	1,706.44	12,676.00	4,715.11	6,612.00	3,687.40	11,630.00
5,145.66	1,614.42	11,089.02	3,977.10	3,546.83	3,370.72	6,688.33
1,376.27	750.31	1,929.91	610.17	738.66	444.23	2,183.16
....	....	....	....	....	....	....
982.16	208.57	1,906.84	1,070.87	256.46	602.04	314.85
....	....	....	....	....	....	....
....	1,030.30	6,719.17	4,002.53	....	....	....
37,779.78	14,963.80	66,226.27	27,126.48	20,936.85	22,387.03	48,743.75
....	629.47	2,631.92	740.43	2,010.95	3,183.07	5,793.55
....	....	12,000.00	1,000.00	....	4,000.00	....
1,860.36	46.38	2,560.20	1,280.27	420.95	963.00	1,105.99
....	....	....	....	....	....	....
....	....	....	....	....	....	....
14,586.78	5,376.07	37,448.90	13,127.01	28,770.11	36,505.85	1,849.12
....	....	....	....	....	....	....
54,226.92	21,015.72	120,867.29	43,274.19	52,138.86	67,038.95	57,492.41
....	948.98	....	....	....	....	....
54,226.92	21,964.70	120,867.29	43,274.19	52,138.86	67,038.95	57,492.41
6,182.09	6,419.88	12,607.23	4,925.17	885.76	990.94	36,240.68
1,232.75	424.02	....	....	3.15	....	99.30
3,511.46	....	....	....	....	....	....
217.42	14.17	328.00	16.00	....	....	543.09
11,143.72	6,858.07	12,935.23	4,941.17	888.91	990.94	36,883.07
14,586.78	5,376.07	37,448.90	13,127.01	28,770.11	36,505.85	1,849.12
8,912.78	3,037.61	14,688.84	6,220.39	2,708.42	7,888.20	11,256.00
....	....	654.83	....	....	....	1,099.88
23,499.56	8,413.68	52,792.57	19,347.40	31,478.53	44,394.05	14,205.00
4,607.49	6,692.95	26,094.69	12,578.21	4,114.24	4,362.06	1,259.32
....	....	....	....	....	....	....
14,976.15	....	29,044.80	6,407.41	15,657.18	17,291.90	5,145.02
19,583.64	6,692.95	55,139.49	18,985.62	19,771.42	21,653.96	6,404.34
54,226.92	21,964.70	120,867.29	43,274.19	52,138.86	67,038.95	57,492.41
28.1	43.9	15.5	16.4	3.8	3.2	66.0

from assets; and the total liabilities are reduced by the amount of the local sinking fund reserve, and the liability in respect to the ornamental street lighting capital, which amount is included in other liabilities.

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Belle River	Blenheim	Blyth	Bolton	Bothwell
Population	810	1,775	652	567	643
Assets	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	....	7,621.82	....	....	....
Substation equipment	....	909.64	....	....	....
Distribution system—overhead	17,963.50	30,203.37	11,597.77	10,270.58	6,489.81
Distribution system—underground	....	....	....	....	....
Line Transformers	4,445.86	9,710.23	2,449.70	4,688.27	2,492.37
Meters	4,097.60	9,991.33	2,212.93	3,352.70	3,199.77
Street light equipment, regular	1,063.75	3,798.14	1,569.43	873.89	3,558.99
Street light equipment, ornamental	....	1,482.97	....	....	1,131.22
Miscellaneous construction expense	1,074.37	655.07	263.27	1,369.78	499.30
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	....	2,096.17	1,554.60	....
Total plant	28,645.08	64,372.57	20,189.27	22,109.82	17,371.46
Bank and cash balance	4,124.47	562.68	4,299.62	....	4,367.14
Securities and investments	....	5,000.00	....	5,000.00	11,000.00
Accounts receivable	829.19	1,978.76	1,010.05	1,145.18	548.61
Inventories	....	1,435.39	....	....	24.63
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	8,974.71	33,233.36	8,490.56	15,723.50	15,802.46
Other assets	....	....	....	....	....
Total assets	42,573.45	106,582.76	33,989.50	43,978.50	49,114.30
Deficit	....	....	....	....	....
Total	42,573.45	106,582.76	33,989.50	43,978.50	49,114.30
Liabilities					
Debenture balance	....	5,677.96	3,460.72	3,137.01	2,027.78
Accounts payable	187.45	6,229.35	164.55	10.00	13.78
Bank overdraft	....	....	....	169.33	....
Other liabilities	180.00	1,715.47	135.00	....	1,186.22
Total liabilities	367.45	13,622.78	3,760.27	3,316.34	3,227.78
Reserves					
For equity in H-E.P.C. systems	8,974.71	33,233.36	8,490.56	15,723.50	15,802.46
For depreciation	8,112.45	16,725.21	4,911.97	7,591.81	8,137.84
Other reserves	5,000.00	137.43	....	....	25.02
Total reserves	22,087.16	50,096.00	13,402.53	23,315.31	23,965.32
Surplus					
Debentures paid	8,500.00	8,322.04	12,571.80	9,362.99	3,506.41
Local sinking fund	....	....	....	....	....
Operating surplus	11,618.84	34,541.94	4,254.90	7,983.86	18,414.79
Total surplus	20,118.84	42,863.98	16,826.70	17,346.85	21,921.20
Total liabilities, reserves and surplus	42,573.45	106,582.76	33,989.50	43,978.50	49,114.30
Percentage of net debt to total assets	1.1	16.9	14.7	11.7	6.5

"A"—Continued

Hydro Municipalities as at December 31, 1938

Brampton 5,638	Brantford 31,282	Brantford Twp.	Bridgeport P.V.	Brigden P.V.	Brussels 780	Burford P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
5,355.12	109,890.18			101.03		202.00
34,176.39	232,411.21	1,192.71				
53,657.47	277,080.68	60,529.77	9,980.05	7,337.87	13,794.49	9,309.55
34,951.58	150,569.97	18,783.55	3,275.45	2,068.13	2,402.70	3,121.12
29,477.61	141,193.33	14,124.15	2,605.14	2,398.29	4,108.62	3,681.57
12,476.64	24,746.25	4,810.05	1,605.09	494.23	1,587.79	425.14
	38,922.18					
20,072.99	33,642.89	2,839.08	621.35	1,198.00	1,544.50	728.00
	6,000.00			1,381.00	2,827.50	
190,167.80	1,014,456.69	102,279.31	18,087.08	14,978.55	26,265.60	17,467.38
50.00	12,455.95	6,804.32	552.81	708.10	5,389.21	2,708.51
3,419.24	81,500.00			2,500.00	5,000.00	4,000.00
5,597.73	25,972.92	744.05	424.93	870.42	944.71	1,019.86
104.55	11,538.11					
		4,912.50				
150,875.39	792,512.19	28,937.27	5,314.14	10,684.95	11,522.89	12,104.92
350,214.71	1,938,435.86	143,677.45	24,378.96	29,742.02	49,122.41	37,300.67
350,214.71	1,938,435.86	143,677.45	24,378.96	29,742.02	49,122.41	37,300.67
2,373.71	84,250.00	6,886.97	8,555.25		7,503.85	
6,616.54	7,856.01				1,757.34	
14,890.77						
245.00	57,432.22	1,864.23	169.29	15.00	29.23	61.08
24,126.02	149,538.23	8,751.20	8,724.54	15.00	9,290.42	61.08
150,875.39	792,512.19	28,937.27	5,314.14	10,684.95	11,522.89	12,104.92
54,773.16	356,103.42	26,870.66	5,601.24	4,967.40	7,188.35	5,791.96
204.35	21,195.87	93.50		101.41		
205,852.90	1,169,811.48	55,901.43	10,915.38	15,753.76	18,711.24	17,896.88
66,676.93	445,750.00	50,238.69	3,812.78	8,000.00	13,496.15	9,000.00
		4,912.50				
53,558.86	173,336.15	23,873.63	926.26	5,973.26	7,624.60	10,342.71
120,235.79	619,086.15	79,024.82	4,739.04	13,973.26	21,120.75	19,342.71
350,214.71	1,938,435.86	143,677.45	24,378.96	29,742.02	49,122.41	37,300.67
12.1	10.1	3.5	45.7	0.0	24.7	0.2

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	Burgess-ville P.V.	Caledonia 1,410	Campbell-ville P.V.	Cayuga 664	Chatham 16,153
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings		177.34			90,216.28
Substation equipment					153,234.38
Distribution system—overhead	3,655.35	18,832.31	2,982.19	15,358.86	153,458.92
Distribution system—underground					85,342.84
Line transformers	1,395.24	6,574.23	820.55	3,402.17	87,816.56
Meters	1,116.14	7,114.10	653.14	3,624.34	72,072.10
Street light equipment, regular	261.02	1,935.58	335.61	960.89	18,877.79
Street light equipment, ornamental					35,426.10
Miscellaneous construction expense	457.22	1,068.41	18.52	621.55	32,501.61
Steam or hydraulic plant					
Old plant					42,752.31
Total plant	6,884.97	35,701.97	4,810.01	23,967.81	771,698.89
Bank and cash balance	444.66	2,525.81	673.11	1,645.01	50.00
Securities and investments		2,000.00	1,000.00	2,500.00	20,000.00
Accounts receivable		699.66	614.43	1,182.54	41,924.87
Inventories				770.89	5,980.13
Sinking fund on local debentures					
Equity in H-E.P.C. systems	4,763.90	19,878.60	2,197.15	8,353.35	349,147.70
Other assets					
Total assets	12,093.53	60,806.04	9,294.70	38,419.60	1,188,801.59
Deficit					
Total	12,093.53	60,806.04	9,294.70	38,419.60	1,188,801.59
LIABILITIES					
Debenture balance		343.68	2,056.52	8,360.46	158,089.53
Accounts payable	189.71	28.48			14,476.06
Bank overdraft					18,654.07
Other liabilities		11.50		127.00	43,229.64
Total liabilities	189.71	383.66	2,056.52	8,487.46	234,449.30
RESERVES					
For equity in H-E.P.C. systems	4,763.90	19,878.60	2,197.15	8,353.35	349,147.70
For depreciation	3,002.14	2,629.23	1,134.21	5,727.56	173,743.05
Other reserves				66.21	19,199.04
Total reserves	7,766.04	22,507.83	3,331.36	14,147.12	542,089.79
SURPLUS					
Debentures paid	3,500.00	4,280.32	3,391.25	11,639.54	211,910.47
Local sinking fund					
Operating surplus	637.78	33,634.23	515.57	4,145.48	200,352.03
Total surplus	4,137.78	37,914.55	3,906.82	15,785.02	412,262.50
Total liabilities, reserves and surplus	12,093.53	60,806.04	9,294.70	38,419.60	1,188,801.59
Percentage of net debt to total assets	2.6	0.9	29.0	28.2	24.7

"A"—Continued

Hydro Municipalities as at December 31, 1938

Chippawa	Clifford	Clinton	Comber	Cottam	Courtright	Dashwood
1,186	446	1,901	P.V.	P.V.	334	P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1,434.46	....	8,820.99	62.00	....	....	....
....	....	7,598.09	....	....	....	....
11,669.40	8,004.46	25,195.53	7,505.46	9,561.43	6,558.19	3,499.11
....	....	....	....	....	....	....
6,289.06	1,077.29	10,590.73	3,760.64	2,133.74	1,225.40	2,400.81
5,503.21	2,415.98	10,169.92	2,554.23	1,932.89	945.92	1,548.87
2,646.89	845.05	5,600.33	423.35	366.43	425.08	353.42
....	....	....	....	....	....	....
1,962.40	37.44	5,051.17	1,108.87	261.65	558.67	291.87
....	....	....	....	....	....	....
....	....	10,658.09	....	....	....	....
29,505.42	12,380.22	83,684.85	15,414.55	14,256.14	9,713.26	8,094.08
2,372.46	2,386.25	2,018.34	1,336.64	447.37	1,943.34	1,387.12
....	....	3,000.00	6,000.00	5,739.70	....	1,500.00
185.24	371.13	1,133.24	320.49	280.44	458.12	635.99
....	....	3,023.81	....	....	....	....
....	....	6,594.51	....	....	....	....
15,315.84	6,062.55	41,387.80	16,868.55	3,684.52	5,029.25	7,506.54
....	....	....	....	....	....	....
47,378.96	21,200.15	140,842.55	39,940.23	24,408.17	17,143.97	19,123.73
....	....	....	....	....	....	....
47,378.96	21,200.15	140,842.55	39,940.23	24,408.17	17,143.97	19,123.73
1,887.96	5,758.82	7,500.00	423.58	4,770.73	....	1,481.96
869.00	....	328.31	626.66	389.77	....	43.09
....	....	....	....	....	....	....
593.41	....	398.81	32.00	195.00	....	....
3,350.37	5,758.82	8,227.12	1,082.24	5,355.50	....	1,525.05
15,315.84	6,062.55	41,387.80	16,868.55	3,684.52	5,029.25	7,506.54
3,873.05	2,818.83	25,745.54	6,712.34	4,358.68	1,835.95	2,942.77
....	....	575.04	....	....	....	....
19,188.89	8,881.38	67,708.38	23,580.89	8,043.20	6,865.20	10,449.31
11,462.04	2,241.18	37,000.00	7,276.42	4,229.49	8,138.35	1,918.04
....	....	6,594.51	....	....	....	....
13,377.66	4,318.77	21,312.54	8,000.68	6,779.98	2,140.42	5,231.33
24,839.70	6,559.95	64,907.05	15,277.10	11,009.47	10,278.77	7,149.37
47,378.96	21,200.15	140,842.55	39,940.23	24,408.17	17,143.97	19,123.73
10.4	38.0	1.8	4.7	25.8	0.0	13.1

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Delaware	Delhi	Dorchester	Drayton	Dresden
Population	P.V.	1,677	P.V.	551	1,477
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	....	....	....	....	....
Substation equipment	....	....	....	....	523.00
Distribution system—overhead	5,070.16	22,425.04	9,261.04	9,838.74	19,719.73
Distribution system—underground	....	....	....	....	....
Line transformers	1,493.55	12,598.38	3,046.56	3,376.80	7,856.84
Meters	1,146.98	8,660.52	2,674.95	3,413.98	6,676.40
Street light equipment, regular	202.58	3,284.74	783.17	772.21	1,127.48
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	203.81	3,148.29	386.56	436.75	1,009.50
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	29,594.42	....	....	4,815.01
Total plant	8,117.08	79,711.39	16,152.28	17,838.48	41,727.96
Bank and cash balance	181.17	3,322.50	319.44	333.27	3,584.53
Securities and investments	2,000.00	....	2,000.00	5,000.00	2,500.00
Accounts receivable	736.37	147.41	1,237.12	1,624.57	6,104.56
Inventories	....	1,587.60	....	....	643.28
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	2,770.18	527.11	6,625.69	11,032.05	28,133.99
Other assets	....	....	....	....	....
Total assets	13,804.80	85,296.01	26,334.53	35,828.37	82,694.32
Deficit	....	....	....	....	....
Total	13,804.80	85,296.01	26,334.53	35,828.37	82,694.32
LIABILITIES					
Debenture balance	1,321.31	55,000.00	1,618.64	4,694.29	....
Accounts payable	154.36	19,706.20	....	694.76	1,364.99
Bank overdraft	....	....	....	....	....
Other liabilities	5.00	1,159.00	28.00	....	235.00
Total liabilities	1,480.67	75,865.20	1,646.64	5,389.05	1,599.99
RESERVES					
For equity in H-E.P.C. systems	2,770.18	527.11	6,625.69	11,032.05	28,133.99
For depreciation	1,063.88	5,313.35	3,191.17	7,441.76	6,029.38
Other reserves	30.00	....	46.17	....	1,767.44
Total reserves	3,864.06	5,840.46	9,863.03	18,473.81	35,930.81
SURPLUS					
Debentures paid	2,678.69	....	2,681.36	4,805.71	16,238.25
Local sinking fund	....	....	....	....	....
Operating surplus	5,781.38	3,590.35	12,143.50	7,159.80	28,925.27
Total surplus	8,460.07	3,590.35	14,824.86	11,965.51	45,163.52
Total liabilities, reserves and surplus	13,804.80	85,296.01	26,334.53	35,828.37	82,694.32
Percentage of net debt to total assets	13.4	89.5	8.4	21.7	2.9

"A"—Continued

Hydro Municipalities as at December 31, 1938

Drumbo	Dublin	Dundas	Dunnville	Dutton	East York Twp.	Elmira
P.V.	P.V.	4,956	4,004	807		2,069
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
...	...	12,111.11	3,356.09	75.11	17,018.18	7,445.61
...	...	13,396.22	27,507.57	...	8,893.55	...
4,663.92	5,902.30	50,908.31	39,747.16	9,173.99	307,711.43	35,083.77
...	...	...	...	...	...	540.21
1,801.50	1,088.61	19,936.42	20,436.78	3,654.29	88,928.53	15,211.77
1,954.57	1,087.60	20,904.90	18,574.06	3,470.18	148,254.68	13,481.60
284.27	544.86	11,453.13	8,441.93	709.26	23,431.36	2,128.74
...	...	1,154.52	...	...	...	...
235.58	787.06	7,606.12	7,448.91	304.53	22,096.92	2,910.99
...	...	...	...	...	...	...
...	...	1,867.38	10,717.62	...	...	2,168.08
8,939.85	9,410.43	139,338.11	136,230.12	17,387.36	616,334.65	78,970.77
5,665.86	1,272.30	28,470.86	9,131.11	243.24	23,864.86	295.85
...	...	1,500.00	10,000.00	7,000.00	2,812.91	11,000.00
313.19	505.45	7,520.25	3,131.25	759.12	4,287.03	3,028.72
...	...	292.17	1,108.84	3.30	8,183.79	...
...	...	...	...	...	...	...
5,761.73	5,098.98	124,619.32	54,382.03	17,521.85	231,196.11	69,381.64
...	...	327.76	...	...	45.81	...
20,680.63	16,287.16	302,068.47	213,983.35	42,914.87	886,725.16	162,676.98
...	...	...	...	...	...	...
20,680.63	16,287.16	302,068.47	213,983.35	42,914.87	886,725.16	162,676.98
1,485.80	...	13,667.18	35,145.34	...	178,133.11	15,301.04
...	398.17	2,839.99	...	...	38,805.57	800.00
...	...	...	...	...	...	...
...	...	6,838.22	1,753.20	177.36	17,056.38	749.89
1,485.80	398.17	23,345.39	36,898.54	177.36	233,995.06	16,850.93
5,761.73	5,098.98	124,619.32	54,382.03	17,521.85	231,196.11	69,381.64
4,456.76	4,378.30	60,486.68	36,501.23	8,525.68	91,727.65	24,491.90
...	...	334.58	...	34.22	2,032.60	...
10,218.49	9,477.28	185,440.58	90,883.26	26,081.75	324,956.36	93,873.54
3,014.20	6,200.00	39,332.82	40,354.66	8,407.49	178,934.67	21,867.46
...	...	...	...	...	...	...
5,962.14	211.71	53,949.68	45,846.89	8,248.27	148,839.07	30,085.05
8,976.34	6,411.71	93,282.50	86,201.55	16,655.76	327,773.74	51,952.51
20,680.63	16,287.16	302,068.47	213,983.35	42,914.87	886,725.16	162,676.98
10.0	3.6	12.6	23.1	0.7	35.7	18.1

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Elora	Embro	Erieau	Erie Beach	Essex
Population	1,149	428	273	21	1,833
Assets	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	1,524.54				
Substation equipment					
Distribution system—overhead	17,505.40	10,202.41	10,819.42	2,379.10	38,014.38
Distribution system—underground					442.55
Line Transformers	7,704.49	3,039.64	2,152.32	925.32	17,159.02
Meters	6,155.75	2,288.52	3,008.45	900.39	12,150.36
Street light equipment, regular	1,245.99	535.73	341.06		1,589.86
Street light equipment, ornamental					7,205.06
Miscellaneous construction expense	1,507.45	187.94	379.90	375.03	1,347.98
Steam or hydraulic plant					
Old plant		429.25			
Total plant	35,643.62	16,683.49	16,701.15	4,579.84	77,909.21
Bank and cash balance	354.55	955.21	308.35	834.62	3,947.23
Securities and investments	7,000.00	3,000.00			15,000.00
Accounts receivable	1,216.89	884.50	689.02	336.50	2,380.34
Inventories	320.26				
Sinking fund on local debentures					
Equity in H-E.P.C. systems	33,275.96	10,090.36	5,499.34	1,381.67	27,020.54
Other assets	202.41				
Total assets	78,013.69	31,613.56	23,197.86	7,132.63	126,257.32
Deficit					
Total	78,013.69	31,613.56	23,197.86	7,132.63	126,257.32
Liabilities					
Debenture balance		616.94	2,598.40	1,786.88	16,196.69
Accounts payable	500.00		261.67		1.00
Bank overdraft					
Other liabilities	119.25		45.00		7,800.68
Total liabilities	619.25	616.94	2,905.07	1,786.88	23,998.37
Reserves					
For equity in H-E.P.C. systems	33,275.96	10,090.36	5,499.34	1,381.67	27,020.54
For depreciation	15,466.02	6,670.99	3,545.32	590.31	19,610.24
Other reserves		43.89	73.02		495.68
Total reserves	48,741.98	16,805.24	9,117.68	1,971.98	47,126.46
Surplus					
Debentures paid	13,000.00	6,883.06	4,284.73	1,513.12	6,303.31
Local sinking fund					
Operating surplus	15,652.46	7,308.32	6,890.38	1,860.65	48,829.18
Total surplus	28,652.46	14,191.38	11,175.11	3,373.77	55,132.49
Total liabilities, reserves and surplus	78,013.69	31,613.56	23,197.86	7,132.63	126,257.32
Percentage of net debt to total assets	1.4	2.7	16.4	31.1	18.2

"A"—Continued

Hydro Municipalities as at December 31, 1938

Etobicoke Twp.	Exeter 1,652	Fergus 2,785	Fonthill 829	Forest 1,502	Forest Hill 10,208	Galt 14,410
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
28,469.50	3,335.73	....	....	6,469.82	8,266.08	201,580.30
....	....	....	....	....	43,971.31	113,734.59
298,768.73	30,349.38	35,101.99	11,797.30	21,366.86	161,894.04	258,477.80
....	....	....	....	....	865.26	....
86,451.11	11,895.95	20,184.21	5,066.12	10,356.16	93,855.38	116,400.56
65,102.14	8,718.37	13,529.47	4,747.71	10,325.37	54,272.57	73,783.12
14,741.40	4,693.43	2,588.89	1,609.86	2,408.49	7,781.77	72,078.33
2,689.44	....	3,522.23	....	....	....	....
24,096.38	3,220.24	1,066.08	238.22	1,805.25	17,569.38	35,576.10
....	....	....	....	....	....	....
....	....	2,546.59	3,500.00	11,042.87	....	....
520,318.70	62,213.10	78,539.46	26,959.21	63,774.82	388,475.79	871,630.80
466.50	2,669.38	....	1,186.77	278.58	2,012.91	2,726.95
....	13,000.00	....	....	15,500.00	....	68,000.00
9,924.38	2,686.40	6,142.28	240.06	4,770.93	57,992.06	38,330.45
5,833.77	1,919.12	58.60	....	2,345.75	....	21,664.79
....	....	....	....	....	....	73,166.51
179,186.29	36,836.74	53,126.89	5,347.28	28,540.71	127,029.50	480,343.84
....	....	779.38	....	....	....	139.63
715,729.64	119,324.74	138,646.61	33,733.32	115,210.79	575,510.26	1,556,002.97
....	....	....	....	....	....	....
715,729.64	119,324.74	138,646.61	33,733.32	115,210.79	575,510.26	1,556,002.97
119,868.28	2,638.60	12,343.70	10,909.80	5,876.36	284,811.53	162,713.73
39,878.98	244.30	5,054.64	....	36.67	24,048.51	25,886.35
....	....	1,160.88	....	....	....	....
9,247.95	231.50	3,547.23	289.30	85.26	5,559.93	1,771.74
168,995.21	3,114.40	22,106.45	11,199.10	5,998.29	314,419.97	190,371.82
179,186.29	36,836.74	53,126.89	5,347.28	28,540.71	127,029.50	480,343.84
106,088.90	15,849.87	11,200.06	2,736.68	17,670.99	80,283.09	299,363.64
789.90	540.71	350.00	....	52.25	....	28,997.02
286,065.09	53,227.32	64,676.95	8,083.96	46,263.95	207,312.59	808,704.50
145,827.12	17,361.45	29,656.30	11,590.20	28,523.64	38,500.07	355,288.22
....	....	....	....	....	....	73,166.51
114,842.22	45,621.57	22,206.91	2,860.06	34,424.91	15,277.63	128,471.92
260,669.34	62,983.02	51,863.21	14,450.26	62,948.55	53,777.70	556,926.65
715,729.64	119,324.74	138,646.61	33,733.32	115,210.79	575,510.26	1,556,002.97
31.1	3.8	22.7	39.1	6.9	70.1	11.7

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Georgetown	Glencoe	Goderich	Granton	Guelph
Population	2,325	810	4,488	P.V.	21,333
Assets	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	673.81	3,230.35	13,569.89	....	13,380.18
Substation equipment	....	....	34,402.48	....	174,069.78
Distribution system—overhead	33,623.02	21,295.26	70,217.09	4,392.03	244,462.43
Distribution system—underground	....	....	....	....	....
Line transformers	21,626.85	7,373.10	20,807.08	1,696.30	102,756.48
Meters	14,506.94	4,315.96	20,442.73	1,610.02	101,851.61
Street light equipment, regular	4,328.70	1,735.09	9,152.70	180.78	43,495.12
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	3,093.58	3,553.03	6,254.82	113.08	27,047.27
Steam or hydraulic plant	....	....	....	....	....
Old plant	2,209.80	....	14,622.15	....	....
Total plant	80,062.70	41,502.79	189,468.94	7,992.21	707,062.87
Bank and cash balance	5,526.73	4,898.15	16,211.11	1,008.72	16,149.22
Securities and investments	6,621.56	....	13,500.00	4,000.00	....
Accounts receivable	2,662.31	2,709.13	4,313.27	598.13	7,542.79
Inventories	....	722.83	1,048.24	....	20,014.00
Sinking fund on local debentures	....	....	....	....	4,752.50
Equity in H-E.P.C. systems	90,031.63	17,890.26	109,094.80	7,260.84	585,490.75
Other assets	....	....	333.44	....	205.14
Total assets	184,904.93	67,723.16	333,969.80	20,859.90	1,341,217.27
Deficit	....	....	....	....	....
Total	184,904.93	67,723.16	333,969.80	20,859.90	1,341,217.27
Liabilities					
Debenture balance	6,120.45	2,780.97	37,070.45	1,419.80	5,000.00
Accounts payable	31.64	....	182.51	800.03	20,269.66
Bank overdraft	....	....	....	....	....
Other liabilities	884.06	96.59	2,431.73	....	2,693.16
Total liabilities	7,036.15	2,877.56	39,684.69	2,219.83	27,962.82
Reserves					
For equity in H-E.P.C. systems	90,031.63	17,890.26	109,094.80	7,260.84	585,490.75
For depreciation	22,143.78	11,388.48	81,844.92	3,229.35	147,787.07
Other reserves	....	377.42	884.72	60.00	2,091.46
Total reserves	112,175.41	29,656.16	191,824.44	10,550.19	735,369.28
Surplus					
Debentures paid	13,879.55	17,331.91	59,017.60	2,080.20	139,999.99
Local sinking fund	....	....	....	....	4,752.50
Operating surplus	51,813.82	17,857.53	43,443.07	6,009.68	433,132.68
Total surplus	65,693.37	35,189.44	102,460.67	8,089.88	577,885.17
Total liabilities, reserves and surplus	184,904.93	67,723.16	333,969.80	20,859.90	1,341,217.27
Percentage of net debt to total assets	7.4	5.8	17.6	16.3	3.1

"A"—Continued

Hydro Municipalities as at December 31, 1938

Hagersville	Hamilton	Harriston	Harrow	Hensall	Hespeler	Highgate
1,307	153,527	1,266	984	680	2,810	349
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
...	959,451.79	395.25	2,221.25	...	4,573.03	...
864.37	2,019,448.78	600.00	...	...	39,867.91	...
20,994.31	1,234,764.53	22,340.94	18,119.92	12,521.72	31,253.12	6,397.77
...	845,103.47	...	...	...	...	...
10,926.05	872,344.38	8,170.04	10,330.81	4,899.17	23,055.02	2,109.25
8,805.09	721,483.31	8,171.01	6,609.32	3,749.35	12,924.72	1,801.55
1,053.17	282,374.44	1,332.00	852.85	612.83	7,285.90	453.91
...	...	...	...	...	...	...
611.85	252,504.59	1,181.80	919.18	614.64	1,675.68	491.60
...	...	...	...	...	...	...
...	32,239.91	1,001.43	...	400.00	...	...
43,254.84	7,219,715.20	43,192.47	39,053.33	22,797.71	120,635.38	11,254.08
9,605.73	137,317.09	1,891.29	1,334.40	1,612.35	15,212.75	976.13
16,000.00	...	3,000.00	...	7,000.00	...	4,000.00
561.90	251,696.04	1,780.50	1,717.91	1,074.68	1,917.93	209.86
...	162,472.17	71.61	581.09	...	295.30	...
...	457,625.90	...	...	...	...	...
68,638.69	4,052,095.80	29,866.18	21,079.36	14,381.26	98,306.27	8,733.74
...	81,140.66	225.86	...	...	...	...
138,061.16	12,362,062.86	80,027.91	63,766.09	46,866.00	236,367.63	25,173.81
...	...	...	...	...	...	...
138,061.16	12,362,062.86	80,027.91	63,766.09	46,866.00	236,367.63	25,173.81
1,689.83	2,129,558.38	6,433.69	2,348.25	4,522.90	24,401.93	...
...	297,114.42	...	404.74	688.05	272.17	...
...	...	...	...	...	...	...
345.00	*945,232.64	...	419.26	42.00	5.00	50.00
2,034.83	3,371,905.44	6,433.69	3,172.25	5,252.95	24,679.10	50.00
68,638.69	4,052,095.80	29,866.18	21,079.36	14,381.26	98,306.27	8,733.74
11,582.37	1,174,344.16	10,076.58	6,061.61	9,394.23	20,068.89	5,173.53
...	479,330.08	...	144.19	...	251.71	...
80,221.06	5,705,770.04	39,942.76	27,285.16	23,775.49	118,626.87	13,907.27
6,310.17	2,089,466.74	19,384.34	9,651.75	7,477.10	53,168.58	5,000.00
...	457,625.90	...	...	...	...	...
49,495.10	737,294.74	14,267.12	23,656.93	10,360.46	39,893.08	6,216.54
55,805.27	3,284,387.38	33,651.46	33,308.68	17,837.56	93,061.66	11,216.54
138,061.16	12,362,062.86	80,027.91	63,766.09	46,866.00	236,367.63	25,173.81
2.9	37.1	12.8	7.4	16.2	17.9	0.3

*$900,000.00 balance purchase agreement.

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Humberstone	Ingersoll	Jarvis	Kingsville	Kitchener
Population	2,629	5,177	505	2,363	32,550
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	....	15,064.45	....	7,774.09	236,294.60
Substation equipment	....	33,283.83	....	....	274,352.27
Distribution system—overhead	26,333.72	56,158.76	9,838.17	32,861.24	371,528.15
Distribution system—underground	....	....	....	....	57,466.00
Line Transformers	9,465.53	29,836.92	3,151.56	13,905.07	196,368.42
Meters	8,950.13	25,778.80	2,778.36	14,658.51	207,687.92
Street light equipment, regular	884.80	4,988.75	929.54	1,439.82	70,331.83
Street light equipment, ornamental	....	4,597.59	....	19,200.00	126,922.86
Miscellaneous construction expense	3,547.70	11,804.78	649.62	368.61	18,188.66
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	19,098.54	....	....	52,363.91
Total plant	49,181.88	200,612.42	17,347.25	90,207.34	1,611,504.62
Bank and cash balance	6,178.96	7,174.09	3,368.99	3,286.02	75.00
Securities and investments	7,000.00	11,716.57	4,000.00	19,000.00	15,000.00
Accounts receivable	513.77	2,988.45	235.49	2,402.03	51,419.72
Inventories	....	1,428.20	....	112.07	14,490.66
Sinking fund on local debentures	....	81,558.03	....	....	....
Equity in H-E.P.C. systems	17,992.32	163,054.47	13,148.41	35,250.80	1,136,054.14
Other assets	....	....	....	....	1,041.01
Total assets	80,866.93	468,532.23	38,100.14	150,258.26	2,829,585.15
Deficit	....	....	....	....	....
Total	80,866.93	468,532.23	38,100.14	150,258.26	2,829,585.15
LIABILITIES					
Debenture balance	11,700.00	79,800.00	3,752.04	24,595.13	104,785.31
Accounts payable	....	852.84	....	....	107,346.42
Bank overdraft	....	....	....	....	410.54
Other liabilities	1,612.66	6,148.30	52.00	22,008.04	127,864.96
Total liabilities	13,312.66	86,801.14	3,804.04	46,603.17	340,407.23
RESERVES					
For equity in H-E.P.C. systems	17,992.32	163,054.47	13,148.41	35,250.80	1,136,054.14
For depreciation	6,156.65	28,442.49	4,287.99	23,965.55	374,312.90
Other reserves	....	617.54	....	418.95	29,602.02
Total reserves	24,148.97	192,114.50	17,436.40	59,635.30	1,539,969.06
SURPLUS					
Debentures paid	20,300.00	....	6,747.96	8,904.87	407,364.69
Local sinking fund	....	81,558.03	....	....	....
Operating surplus	23,105.30	108,058.56	10,111.74	35,114.92	541,844.17
Total surplus	43,405.30	189,616.59	16,859.70	44,019.79	949,208.86
Total liabilities, reserves and surplus	80,866.93	468,532.23	38,100.14	150,258.26	2,829,585.15
Percentage of net debt to total assets	21.1	0.3	15.2	28.6	13.6

"A"—Continued

Hydro Municipalities as at December 31, 1938

Lambeth	La Salle	Leamington	Listowel	London	London Twp.	Long Branch
P.V.	812	5,446	2,826	74,281		4,029
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	1,810.68	17,898.40	1,459.49	454,758.50	....	....
....	....	7,085.62	....	977,546.28	....	....
7,874.27	20,739.49	52,680.44	41,896.14	813,339.62	20,119.78	55,473.03
....	....	11,991.15	5,066.38	334,237.08	....	....
1,883.12	6,760.24	24,516.28	19,732.58	350,233.59	7,409.90	14,325.60
2,579.77	4,487.68	25,038.94	16,997.15	361,866.36	5,331.57	18,387.43
1,052.75	1,054.22	1,380.13	2,629.28	72,200.71	1,519.84	4,774.88
....	....	15,178.49	1,348.66	92,286.12	....	....
318.68	1,947.46	3,194.18	2,547.03	98,175.81	1,986.17	2,050.14
....	....	....	....	....	....	....
....	....	....	4,745.30	....	1,733.80	....
13,708.59	36,799.77	158,963.63	96,422.01	3,554,644.07	38,101.06	95,011.08
701.71	5,904.38	2,687.42	5,300.94	6,950.38	....	7,035.74
2,000.00	....	23,813.81	7,000.00	....	1,000.00	....
586.33	1,272.16	6,959.94	3,836.67	283,286.21	1,811.52	5,474.95
....	39.24	65.52	141.40	122,826.76	....	....
....	....	....	....	449,425.76	....	....
8,554.77	12,183.04	72,830.19	67,333.92	2,160,457.00	16,831.62	20,021.81
....	....	....	....	14,411.91	393.41	....
25,551.40	56,198.59	265,320.51	180,034.94	6,592,002.09	58,137.61	127,543.58
....	....	....	....	....	....	....
25,551.40	56,198.59	265,320.51	180,034.94	6,592,002.09	58,137.61	127,543.58
....	7,543.81	....	1,438.59	607,009.00	4,949.45	14,658.49
481.52	1,341.35	122.51	108.56	94,905.81	1,335.42	3,323.96
....	....	....	....	18,760.23	255.66	....
85.00	562.09	18,197.92	1,634.54	94,556.93	393.41	2,872.16
566.52	9,447.25	18,320.43	3,181.69	815,231.97	6,933.94	20,854.61
8,554.77	12,183.04	72,830.19	67,333.92	2,160,457.00	16,831.62	20,021.81
4,521.07	9,469.39	34,991.88	39,411.24	1,192,336.07	8,031.97	20,312.80
42.08	321.48	191.39	....	110,815.26	42.97	326.28
13,117.92	21,973.91	108,013.46	106,745.16	3,463,608.33	24,906.56	40,660.89
4,000.00	7,956.19	48,000.00	41,751.30	974,891.00	14,050.55	25,646.11
....	....	....	....	449,425.76	....	....
7,866.96	16,821.24	90,986.62	28,356.79	888,845.03	12,246.56	40,381.97
11,866.96	24,777.43	138,986.62	70,108.09	2,313,161.79	26,297.11	66,028.08
25,551.40	56,198.59	265,320.51	180,034.94	6,592,002.09	58,137.61	127,543.58
3.3	21.5	1.8	1.6	7.0	16.8	19.3

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Lucan	Lynden	Markham	Merlin	Merritton
Population	614	P.V.	1,116	P.V.	2,644
Assets	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings		241.18			6,575.31
Substation equipment					67,231.95
Distribution system—overhead	10,919.23	4,805.02	18,007.53	8,390.21	37,730.97
Distribution system—underground					
Line transformers	4,610.64	2,166.63	8,687.15	3,618.88	10,335.55
Meters	3,644.05	1,960.02	6,467.32	2,285.57	12,767.32
Street light equipment, regular	580.73	354.06	750.76	560.17	4,728.28
Street light equipment, ornamental					
Miscellaneous construction expense	535.77	273.57	1,397.58	455.36	3,501.38
Steam or hydraulic plant					
Old plant	2,860.45			241.85	
Total plant	23,150.87	9,800.48	35,310.34	15,552.04	142,870.76
Bank and cash balance	1,347.50	3,039.23		2,462.83	3,331.05
Securities and investments	8,000.00		7,000.00	6,000.00	
Accounts receivable	654.57	353.77	921.92	246.63	223.22
Inventories					
Sinking fund on local debentures					
Equity in H-E.P.C. systems	16,505.43	11,944.62	16,298.90	10,533.16	121,200.80
Other assets			94.01		
Total assets	49,658.37	25,138.10	59,625.17	34,794.66	267,625.83
Deficit					
Total	49,658.37	25,138.10	59,625.17	34,794.66	267,625.83
Liabilities					
Debenture balance	2,822.99	1,757.95		3,734.09	11,210.23
Accounts payable		37.72		88.53	14,897.29
Bank overdraft			350.79		
Other liabilities	282.22		253.78	85.00	
Total liabilities	3,105.21	1,795.67	604.57	3,907.62	26,107.52
Reserves					
For equity in H-E.P.C. systems	16,505.43	11,944.62	16,298.90	10,533.16	121,200.80
For depreciation	10,335.97	3,626.60	6,053.21	3,897.31	16,698.35
Other reserves			123.24	23.40	
Total reserves	26,841.40	15,571.22	22,475.35	14,453.87	137,899.15
Surplus					
Debentures paid	8,390.63	2,737.05	11,373.63	9,630.12	20,975.98
Local sinking fund					
Operating surplus	11,321.13	5,034.16	25,171.62	6,803.05	82,643.18
Total surplus	19,711.76	7,771.21	36,545.25	16,433.17	103,619.16
Total liabilities, reserves and surplus	49,658.37	25,138.10	59,625.17	34,794.66	267,625.83
Percentage of net debt to total assets	9.4	13.6	1.4	16.1	17.8

"A"—Continued

Hydro Municipalities as at December 31, 1938

Milton 1,791	Milverton 1,006	Mimico 6,940	Mitchell 1,607	Moorefield P.V.	Mount Brydges P.V.	Newbury 279
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	237.20	19,791.60	18,139.20	....	....	....
16,418.16	....	38,461.02	19,666.10	....	....	....
23,295.84	12,195.10	77,360.93	31,817.00	3,086.96	7,542.77	7,086.73
....	....	....	....	....	....	....
15,981.30	8,101.30	35,520.60	11,851.97	1,211.63	2,305.43	1,797.86
14,165.77	5,589.87	29,911.85	12,928.99	1,311.68	2,709.06	1,346.04
5,033.13	765.09	8,760.75	7,094.87	295.88	1,385.36	866.47
....	....	....	....	....	....	....
5,214.78	921.54	10,680.44	1,698.98	357.85	194.76	511.93
....	....	....	....	....	....	....
3,092.54	....	....	1,490.00	....	....	348.22
83,201.52	27,810.10	220,487.19	104,687.11	6,264.00	14,137.38	11,957.25
4,864.48	933.99	17,304.75	1,656.16	2,461.62	4,243.41	1,830.03
4,000.00	4,000.00	....	7,500.00	....	3,000.00	....
1,654.41	884.80	4,391.69	9,161.68	269.48	332.18	908.09
3,888.83	....	....	4,395.64	....	....	....
....	....	....	....	....	....	....
89,854.18	38,677.60	123,378.37	38,871.03	5,530.21	6,662.49	4,025.16
....	....	....	....	....	21.90	....
187,463.42	72,306.49	365,562.00	166,271.62	14,525.31	28,397.36	18,720.53
....	....	....	....	....	....	....
187,463.42	72,306.49	365,562.00	166,271.62	14,525.31	28,397.36	18,720.53
4,190.41	....	52,784.85	....	....	1,450.54	1,800.00
1,743.46	256.92	2,618.25	175.01	....	290.42	8.43
....	....	....	....	....	....	....
334.08	....	6,266.08	221.00	....	165.07	45.00
6,267.95	256.92	61,669.18	396.01	....	1,906.03	1,853.43
89,854.18	38,667.60	123,378.37	38,871.03	5,530.21	6,662.49	4,025.16
18,757.70	7,539.03	61,042.52	41,814.95	2,936.93	3,814.30	3,824.68
128.33	....	1,902.90	1,737.25	....	100.00	....
108,740.21	46,216.63	186,323.79	82,423.23	8,467.14	10,576.79	7,849.84
28,856.00	9,500.00	74,215.15	22,295.22	4,500.00	2,769.46	7,954.39
....	....	....	....	....	....	....
43,599.26	16,332.94	43,353.88	61,157.16	1,558.17	13,145.08	1,062.87
72,455.26	25,832.94	117,569.03	83,452.38	6,058.17	15,914.54	9,017.26
187,463.42	72,306.49	365,562.00	166,271.62	14,525.31	28,397.36	18,720.53
6.4	0.8	25.4	0.3	0.0	8.7	12.6

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	New Hamburg	New Toronto	Niagara Falls	Niagara-on the-Lake	North York Twp.
Population	1,441	7,095	18,747	1,651	
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	2,513.19	44,097.67	132,496.29	2,307.35	28,600.62
Substation equipment	1,217.05	....	230,769.30	16,048.36	....
Distribution system—overhead	24,238.58	86,532.92	196,086.91	32,564.18	391,461.21
Distribution system—underground	....	8,605.69	....	....	....
Line Transformers	7,205.84	36,494.20	171,730.62	10,190.11	111,105.36
Meters	9,177.43	35,760.58	115,712.09	9,064.92	60,081.41
Street light equipment, regular	2,197.40	12,521.72	121,165.66	3,195.15	156.00
Street light equipment, ornamental	....	....	....	....	13,491.21
Miscellaneous construction expense	1,347.69	7,857.55	10,970.94	2,240.81	26,058.98
Steam or hydraulic plant	....	....	....	....	....
Old plant	5,242.56	....	19,467.25	....	....
Total plant	53,139.74	231,870.33	998,399.06	75,610.88	630,954.79
Bank and cash balance	1,441.03	13,675.06	74,579.18	4,687.13	10,030.09
Securities and investments	7,000.00	....	50,000.00	....	....
Accounts receivable	2,008.75	7,542.17	6,841.11	4,775.04	5,300.35
Inventories	573.91	1,565.75	5,213.23	2,409.57	247.53
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	43,553.89	383,182.07	505,944.49	27,137.36	115,470.50
Other assets	....	....	3,130.83	....	....
Total assets	107,717.32	637,835.38	1,644,107.90	114,619.98	762,003.26
Deficit	....	....	....	....	....
Total	107,717.32	637,835.38	1,644,107.90	114,619.98	762,003.26
LIABILITIES					
Debenture balance	2,177.30	2,253.11	206,822.44	15,746.94	278,345.73
Accounts payable	....	....	12,282.51	....	42,207.76
Bank overdraft	....	....	....	....	....
Other liabilities	271.50	6,631.22	16,125.30	245.00	22,852.38
Total liabilities	2,448.80	8.884.33	235,230.25	15,991.94	343,405.87
RESERVES					
For equity in H-E.P.C. systems	43,553.89	383,182.07	505,944.49	27,137.36	115,470.50
For depreciation	15,894.86	58,303.47	229,476.09	15,908.52	103,125.54
Other reserves	33.83	1,396.96	15,245.54	1,015.86	....
Total reserves	59,482.58	442,882.50	750,666.02	44,061.74	218,596.04
SURPLUS					
Debentures paid	15,551.78	5,746.89	483,420.56	20,754.48	164.676.14
Local sinking fund	....	....	....	....	....
Operating surplus	30,234.16	180,321.66	174,791.07	33,811.82	35,325.21
Total surplus	45,785.94	186,068.55	658,211.63	54,566.30	200,001.35
Total liabilities, reserves and surplus	107,717.32	637,835.38	1,644,107.90	114,619.98	762,003.26
Percentage of net debt to total assets	3.8	3.5	20.7	18.3	52.1

"A"—Continued

Hydro Municipalities as at December 31, 1938

Norwich 1,212	Oil Springs 470	Otterville P.V.	Palmerston 1,410	Paris 4,325	Parkhill 997	Petrolia 2,711
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
4,638.76	1,524.68	....	....	8,781.50	....	900.00
....	....	....	1,346.28	28,126.55	....	5,956.75
11,301.52	13,799.87	8,055.99	32,405.44	55,626.68	16,090.01	47,110.67
....	....	....	....	....	....	....
6,847.08	5,300.35	4,115.99	10,052.42	22,949.68	4,359.83	29,231.68
7,485.85	3,733.52	2,573.93	7,810.69	20,538.70	4,263.78	15,918.15
4,685.64	308.24	1,548.33	6,715.06	14,059.22	995.06	6,324.44
....	....	....	....	....	....	....
2,149.68	2,106.11	142.00	3,545.38	2,987.49	1,298.29	6,680.39
....	....	....	....	....	....	....
3,509.82	....	....	4,018.71	....	....	3,389.94
40,618.35	26,772.77	16,436.24	65,893.98	153,069.82	27,006.97	115,512.02
1,908.53	5,196.22	3,616.24	143.54	12,085.38	1,356.19	7,418.62
5,000.00	1,259.70	....	....	28,500.00	4,000.00	8,400.00
4,506.98	833.21	1,511.13	493.99	509.68	1,392.91	6,684.72
2,549.42	133.09	....	2,888.48	....	....	428.18
....	....	....	....	....	....	....
32,279.19	22,067.63	7,578.75	37,519.01	98,616.97	16,481.83	89,435.96
....	....	....	....	....	....	....
86,862.47	56,262.62	29,142.36	106,939.00	292,781.85	50,237.90	227,879.50
....	....	....	....	....	....	....
86,862.47	56,262.62	29,142.36	106,939.00	292,781.85	50,237.90	227,879.50
2,744.95	....	....	1,554.59	5,360.02	1,129.00	13,685.65
....	101.29	200.23	3,370.48	342.93	20.03	2,641.03
....	....	....	....	....	....	....
293.50	24.00	51.25	342.50	....	100.00	887.50
3,038.45	125.29	251.48	5,267.57	5,702.95	1,249.03	17,214.18
32,279.19	22,067.63	7,578.75	37,519.01	98,616.97	16,481.83	89,435.96
8,100.69	8,553.97	5,437.87	7,234.81	75,151.56	8,674.72	36,411.38
827.00	90.03	....	420.07	59.25	....	619.87
41,206.88	30,711.63	13,016.62	45,173.89	173,827.78	25,156.55	126,467.21
11,011.05	16,721.31	4,500.00	25,445.41	86,639.98	13,501.02	36,314.35
....	....	....	....	....	....	....
31,606.09	8,704.39	11,374.26	31,052.13	26,611.14	10,331.30	47,883.76
42,617.14	25,425.70	15,874.26	56,497.54	113,251.12	23,832.32	84,198.11
86,862.47	56,262.62	29,142.36	106,939.00	292,781.85	50,237.90	227,879.50
5.6	0.4	1.2	7.6	2.9	3.7	12.4

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	Plattsville P.V.	Point Edward 1,161	Port Colborne 6,348	Port Credit 1,751	Port Dalhousie 1,565
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings			22,682.74	675.00	
Substation equipment					
Distribution system—overhead	4,381.03	21,653.09	92,345.57	27,091.28	20,063.38
Distribution system—underground					
Line Transformers	1,890.66	6,984.43	29,709.65	12,178.60	10,640.39
Meters	2,079.29	5,494.23	25,008.62	10,335.76	10,294.41
Street light equipment, regular	147.15	3,091.41	4,744.86	4,922.71	1,041.19
Street light equipment, ornamental			16,611.59		
Miscellaneous construction expense	535.92	503.14	6,875.59	3,020.21	4,071.63
Steam or hydraulic plant					
Old plant			9,929.60		6,018.38
Total plant	9,034.05	37,726.30	207,908.22	58,223.56	52,129.38
Bank and cash balance	2,803.20	1,101.88	6,890.84	1,832.16	152.70
Securities and investments	2,000.00	13,000.00	1,500.00		3,000.00
Accounts receivable	542.14	3,176.68	19,304.98	3,622.12	3,670.84
Inventories			4,249.23		
Sinking fund on local debentures					4,247.60
Equity in H-E.P.C. systems	7,876.11	49,249.89	83,172.43	34,402.54	30,256.29
Other assets					
Total assets	22,255.50	104,254.75	323,025.70	98,080.38	93,456.81
Deficit					
Total	22,255.50	104,254.75	323,025.70	98,080.38	93,456.81
LIABILITIES					
Debenture balance	1,729.46	4,287.33	53,785.60	5,045.44	6,510.56
Accounts payable			22.53	2,760.65	41.30
Bank overdraft					
Other liabilities		339.29	19,628.55	655.00	133.00
Total liabilities	1,729.46	4,626.62	73,436.68	8,461.09	6,684.86
RESERVES					
For equity in H-E.P.C. systems	7,876.11	49,249.89	83,172.43	34,402.54	30,256.29
For depreciation	4,036.98	13,502.03	48,042.83	17,819.67	7,346.84
Other reserves		116.45	3,346.07	182.05	926.31
Total reserves	11,913.09	62,868.37	134,561.33	52,404.26	38,529.44
SURPLUS					
Debentures paid	3,507.54	12,712.67	92,214.40	9,454.56	15,989.44
Local sinking fund					4,247.60
Operating surplus	5,105.41	24,047.09	22,813.29	27,760.47	28,005.47
Total surplus	8,612.95	36,759.76	115,027.69	37,215.03	48,242.51
Total liabilities, reserves and surplus	22,255.50	104,254.75	323,025.70	98,080.38	93,456.81
Percentage of net debt to total assets	12.0	8.4	25.4	13.3	4.1

"A"—Continued

Hydro Municipalities as at December 31, 1938

Port Dover 1,640	Port Rowan 659	Port Stanley *741	Preston 6,415	Princeton P.V.	Queenston P.V.	Richmond Hill 1,241
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
248.75	....	1,574.60	....	....	....	....
....	....	....	56,955.28	....	....	600.00
34,810.92	9,565.78	25,238.14	90,572.53	4,370.06	8,358.93	10,872.77
....	....	....	....	....	....	....
11,936.48	1,684.07	12,670.02	50,818.82	2,636.23	3,022.94	9,349.08
8,930.60	2,234.90	11,047.26	40,258.84	1,311.56	1,583.54	6,002.13
2,673.13	890.49	2,036.64	5,442.53	207.93	422.43	1,334.77
....	....	....	....	....	....	....
3,415.44	735.13	7,271.80	11,037.85	117.75	2,438.61	724.16
....	....	....	....	....	....	....
....	....	577.51	32,126.75	....	....	....
62,015.32	15,110.37	60,415.97	287,212.60	8,643.53	15,826.45	28,882.91
4,164.39	1,163.72	1,372.53	18,314.12	6,107.52	810.00	2,332.04
....	2,000.00	8,000.00	....	....	....	....
3,089.96	1,223.58	1,660.51	7,582.24	959.07	313.07	1,380.08
....	....	....	4,916.53	....	....	240.28
....	....	....	....	....	....	....
21,890.84	5,780.58	35,008.12	229,099.17	7,968.25	5,970.31	16,280.97
20.00	....	....	....	25.00	....	....
91,180.51	25,278.25	106,457.13	547,124.66	23,703.37	22,919.83	49,116.28
....	....	....	....	....	....	....
91,180.51	25,278.25	106,457.13	547,124.66	23,703.37	22,919.83	49,116.28
3,356.70	6,523.03	2,640.47	28,908.15	1,172.25	2,864.44	1,728.21
1,830.87	....	1,029.94	11,494.46	....	....	114.00
....	....	....	....	....	....	....
678.00	170.00	153.26	1,023.10	....	25.00	354.84
5,865.57	6,693.03	3,823.67	41,425.71	1,172.25	2,889.44	2,197.05
21,890.84	5,780.58	35,008.12	229,099.17	7,968.25	5,970.31	16,280.97
12,827.47	3,340.77	13,589.56	126,522.86	3,322.44	4,148.98	3,163.78
....	....	75.23	610.37	....	....	....
34,718.31	9,121.35	48,672.91	356,232.40	11,290.69	10,119.29	19,444.75
25,643.30	4,476.97	16,309.53	123,891.85	2,377.75	6,635.56	10,471.79
....	....	....	....	....	....	....
24,953.33	4,986.90	37,651.02	25,574.70	8,862.68	3,275.54	17,002.69
50,596.63	9,463.87	53,960.55	149,466.55	11,240.43	9,911.10	27,474.48
91,180.51	25,278.25	106,457.13	547,124.66	23,703.37	22,919.83	49,116.28
8.4	34.3	5.3	13.0	7.5	17.0	6.7

*Winter population 741—Summer 3500 additional.

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Ridgetown	Riverside	Rockwood	Rodney	St. Catharines
Population	1,956	5,090	P.V.	722	27,426
	$ c.	$ c.	$ c.	$ c.	$ c.
ASSETS					
Lands and buildings	2,000.00	2,528.73	79.00	....	52,499.01
Substation equipment	1,024.24	....	....	....	136,186.41
Distribution system—overhead	23,339.73	91,840.85	8,110.51	12,060.73	238,476.92
Distribution system—underground	....	....	....	....	....
Line transformers	10,581.96	32,583.00	2,956.33	3,015.38	155,794.86
Meters	9,930.32	23,704.29	3,258.63	3,698.65	102,123.73
Street light equipment, regular	5,074.00	....	694.18	3,578.02	20,423.21
Street light equipment, ornamental	1,431.73	17,030.71	....	....	29,486.71
Miscellaneous construction expense	1,515.17	7,041.11	473.95	773.34	26,908.43
Steam or hydraulic plant	....	....	....	....	....
Old plant	5,088.46	....	....	700.00	17,507.89
Total plant	59,985.61	174,728.69	15,572.60	23,826.12	779,407.17
Bank and cash balance	458.08	11,921.28	1,711.34	1,806.95	14,693.71
Securities and investments	11,000.00	....	....	....	57,000.00
Accounts receivable	1,608.67	12,402.13	346.39	832.24	40,281.98
Inventories	299.17	163.14	93.78	....	10,833.17
Sinking fund on local debentures	....	....	....	....	86,419.01
Equity in H-E.P.C. systems	36,765.88	71,118.28	9,866.79	11,499.31	498,408.23
Other assets	....	318.57	....	....	233.56
Total assets	110,117.41	270,652.09	27,590.90	37,964.62	1,487,276.83
Deficit	....	....	....	....	....
Total	110,117.41	270,652.09	27,590.90	37,964.62	1,487,276.83
LIABILITIES					
Debenture balance	4,258.60	31,418.66	1,884.41	....	159,750.00
Accounts payable	4,046.40	2,778.61	20.05	129.35	49,838.23
Bank overdraft	....	....	....	....	....
Other liabilities	2,058.21	19,378.03	76.00	245.00	29,836.21
Total liabilities	10,363.21	53,575.30	1,980.46	374.35	239,424.44
RESERVES					
For equity in H-E.P.C. systems	36,765.88	71,118.28	9,866.79	11,499.31	498,408.23
For depreciation	15,331.57	38,460.01	6,147.25	2,207.65	201,986.32
Other reserves	275.00	4,837.34	....	64.62	5,918.92
Total reserves	52,372.45	114,415.63	16,014.04	13,771.58	706,313.47
SURPLUS					
Debentures paid	15,197.39	51,081.34	2,615.59	8,500.00	142,272.91
Local sinking fund	....	....	....	....	86,419.01
Operating surplus	32,184.36	51,579.82	6,980.81	15,318.69	312,847.00
Total surplus	47,381.75	102,661.16	9,596.40	23,818.69	541,538.92
Total liabilities, reserves and surplus	110,117.41	270,652.09	27,590.90	37,964.62	1,487,276.83
Percentage of net debt to total assets	12.4	20.0	11.2	1.4	14.1

"A"—Continued

Hydro Municipalities as at December 31, 1938

St. Clair Beach 110	St. George P.V.	St. Jacobs P.V.	St. Marys 4,017	St. Thomas 16,208	Sarnia 18,155	Scarboro Twp.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	....	3,000.00	78,779.06	112,431.86	17,273.95
....	....	....	26,480.28	130,249.43	208,257.35	301.95
8,087.48	5,976.60	6,904.32	61,482.09	109,652.69	220,394.92	294,920.97
....	....	....	....	52,815.87	....	....
2,880.61	2,729.42	3,696.90	24,133.74	62,886.86	78,268.91	68,109.83
1,688.92	3,425.73	3,171.05	24,137.23	74,598.64	76,027.01	70,738.60
....	286.41	368.97	6,361.34	22,118.60	27,251.96	20,783.55
....	....	....	....	3,693.04	8,271.83	....
264.20	374.18	588.49	10,922.96	13,479.00	23,304.48	10,385.51
....	....	....	....	....	....	....
....	....	....	20,696.85	....	55,445.72	....
12,921.21	12,792.34	14,729.73	177,214.49	548,273.19	809,654.04	482,514.36
1,605.45	3,019.76	311.76	10,296.36	125.00	47,159.76	193,350.72
....	....	3,000.00	10,000.00	56,000.00	100,000.00	2,680.00
575.18	610.89	786.28	7,133.32	16,120.10	30,449.00	17,830.15
....	....	....	1,298.57	10,368.24	20,471.68	....
....	....	....	1,931.34	....	....	....
5,814.44	12,302.27	13,685.21	116,825.42	426,453.41	536,266.17	156,777.70
....	....	....	....	....	....	101.52
20,916.28	28,725.26	32,512.98	324,699.50	1,057,339.94	1,544,000.65	853,254.45
....	....	....	....	....	....	....
20,916.28	28,725.26	32,512.98	324,699.50	1,057,339.94	1,544,000.65	853,254.45
1,610.19	2,071.11	....	28,524.73	1,762.44	41,146.80	115,445.98
232.30	....	114.97	2,267.02	6,352.26	....	151,045.82
....	....	....	....	3,548.56	....	....
56.59	162.50	....	175.00	13,783.90	14,365.34	33,156.58
1,899.08	2,233.61	114.97	30,966.75	25,447.16	55,512.14	299,648.38
5,814.44	12,302.27	13,685.21	116,825.42	426,453.41	536,266.17	156,777.70
3,904.97	3,415.21	3,766.05	63,091.60	156,083.91	190,360.20	113,092.52
256.67	....	....	398.90	752.31	2,355.60	5,050.95
9,976.08	15,717.48	17,451.26	180,315.92	583,289.63	728,981.97	274,921.17
4,731.26	3,928.89	6,000.00	85,722.29	137,181.63	296,853.20	175,122.29
....	....	....	1,931.34	....	....	....
4,309.86	6,845.28	8,946.75	25,763.20	311,421.52	462,653.34	103,562.61
9,041.12	10,774.17	14,946.75	113,416.83	448,603.15	759,506.54	278,684.90
20,916.28	28,725.26	32,512.98	324,699.50	1,057,339.94	1,544,000.65	853,254.45
12.5	13.6	0.6	14.1	3.4	4.6	43.0

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Seaforth	Simcoe	Springfield	Stamford Twp.	Stouffville
Population	1,708	5,826	378		1,115
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	1,836.39	10,001.76		7,196.71	
Substation equipment	5,999.16	41,525.47		37,384.60	
Distribution system—overhead	32,172.08	54,664.66	10,045.54	136,755.82	13,365.24
Distribution system—underground		1,412.24			
Line Transformers	10,945.60	36,339.45	3,581.91	50,568.16	4,627.29
Meters	10,921.35	31,111.34	2,119.11	36,204.69	4,891.51
Street light equipment, regular	4,969.46	7,592.37	575.57	9,893.43	1,613.55
Street light equipment, ornamental		3,500.00			
Miscellaneous construction expense	1,499.09	5,620.11	685.08	9,493.38	528.21
Steam or hydraulic plant					
Old plant		927.92		13,743.66	
Total plant	68,343.13	192,695.32	17,007.21	301,240.45	25,025.80
Bank and cash balance	4,530.56	19,668.48	2,501.51	8,458.87	4,243.51
Securities and investments	100.00	10,000.00	500.00		8,000.00
Accounts receivable	1,795.74	3,400.99	711.56	19,258.61	1,359.43
Inventories	1,428.53	4,048.87		8,014.17	
Sinking fund on local debentures					
Equity in H-E.P.C. systems	54,433.26	88,489.70	8,164.02	83,563.62	14,017.09
Other assets				324.76	21.57
Total assets	130,631.22	318,303.36	28,884.30	420,860.48	52,667.40
Deficit					
Total	130,631.22	318,303.36	28,884.30	420,860.48	52,667.40
LIABILITIES					
Debenture balance		37,703.35	2,617.79	108,993.50	264.41
Accounts payable	33.37	165.55	1,495.40	5,751.71	814.57
Bank overdraft					
Other liabilities	284.15	3,820.00	27.00	5,063.46	135.00
Total liabilities	317.52	41,688.90	4,140.19	119,808.67	1,213.98
RESERVES					
For equity in H-E.P.C. systems	54,433.26	88,489.70	8,164.02	83,563.62	14,017.09
For depreciation	24,652.06	25,409.19	1,668.69	52,018.98	4,442.09
Other reserves	458.58	10,000.00		3,261.77	98.65
Total reserves	79,543.90	123,898.89	9,832.71	138,844.37	18,557.83
SURPLUS					
Debentures paid	25,000.00	37,731.55	6,882.21	131,284.67	14,409.49
Local sinking fund					
Operating surplus	25,769.80	114,984.02	8,029.19	30,922.77	18,486.10
Total surplus	50,769.80	152,715.57	14,911.40	162,207.44	32,895.59
Total liabilities, reserves and surplus	130,631.22	318,303.36	28,884.30	420,860.48	52,667.40
Percentage of net debt to total assets	0.4	16.8	20.0	35.6	3.1

"A"—Continued

Hydro Municipalities as at December 31, 1938

Stratford 17,615	Strathroy 2,947	Streetsville 672	Sutton 852	Swansea 5,831	Tavistock 1,037	Tecumseh 2,245	Thamesford P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
141,389.22	8,856.05	2,038.47	....	....	2,922.56	1,018.51	....
131,296.28	23,640.34	1,172.04	....	....	....	....	....
158,746.14	50,389.39	8,737.43	20,690.76	69,582.58	13,796.60	35,609.78	7,757.33
22,719.37	....	....	....	....	....	....	....
97,676.45	23,070.01	5,167.99	7,660.31	43,575.70	9,670.45	11,316.12	3,251.85
84,045.22	17,354.63	2,985.78	6,472.01	31,237.06	5,536.76	10,862.87	3,131.65
25,462.64	5,863.19	1,054.40	1,906.40	5,266.18	1,102.93	....	298.97
....	....	....	....	....	....	4,760.95	....
28,983.76	5,611.26	664.70	2,400.19	7,276.70	1,654.55	2,102.44	496.40
....	....	10,641.55	....	....	....	....	....
31,520.00	12,343.15	....	675.00	....	....	....	....
721,839.08	147,128.02	32,462.36	39,804.67	156,938.22	34,683.85	65,670.67	14,936.20
24,473.98	4,679.56	8,324.48	281.77	3,039.50	....	1,549.36	....
90,000.00	17,000.00	....	....	....	2,000.00	....	8,500.00
24,102.69	8,379.24	701.37	5,242.53	16,651.15	1,585.33	3,245.87	859.41
9,766.24	3,249.45	....	....	....	....	....	....
249,644.90	....	....	....	....	....	....	....
525,264.74	76,001.55	1,488.75	13,649.67	60,734.07	39,045.42	22,225.61	14,727.30
....	43.22	....	130.70	....	....	....	....
1,645,091.63	256,481.04	42,976.96	59,109.34	237,362.94	77,314.60	92,691.51	39,022.91
....	....	....	....	....	....	....	....
1,645,091.63	256,481.04	42,976.96	59,109.34	237,362.94	77,314.60	92,691.51	39,022.91
340,000.00	25,966.47	12,175.13	8,362.69	79,971.50	2,522.71	6,780.41	898.38
....	89.59	....	845.21	9,556.02	....	3,355.34	....
....	....	....	....	....	1,039.03	....	489.25
4,599.90	794.09	228.87	5.00	2,324.48	....	5,779.24	75.00
344,599.90	26,850.15	12,404.00	9,212.90	91,852.00	3,561.74	15,914.99	1,462.63
525,264.74	76,001.55	1,488.75	13,649.67	60,734.07	39,045.42	22,225.61	14,727.30
296,194.16	36,594.67	3,804.88	8,698.12	44,314.56	11,042.41	14,879.91	5,778.33
4,970.01	1,165.51	25.00	....	....	....	1,470.09	....
826,428.91	113,761.73	5,318.63	22,347.79	105,048.63	50,087.83	38,575.61	20,505.63
115,800.00	40,265.53	5,369.95	17,637.31	22,342.25	3,477.29	19,219.59	4,459.65
249,644.90	....	....	....	....	....	....	....
108,617.92	75,603.63	19,884.38	9,911.34	18,120.06	20,187.74	18,981.32	12,595.00
474,062.82	115,869.16	25,254.33	27,548.65	40,462.31	23,665.03	38,200.91	17,054.65
1,645,091.63	256,481.04	42,976.96	59,109.34	237,362.94	77,314.60	92,691.51	39,022.91
10.9	14.8	29.9	20.3	52.0	9.3	17.0	6.0

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Thamesville	Thedford	Thorndale	Thorold	Tilbury
Population	814	593	P.V.	4,904	1,980
Assets	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	681.69			9,892.59	969.46
Substation equipment					
Distribution system—overhead	12,717.83	9,452.65	3,586.56	35,036.81	16,241.77
Distribution system—underground					
Line transformers	5,662.60	3,167.91	1,595.95	19,031.02	12,761.37
Meters	4,137.35	2,529.35	1,840.53	21,316.17	7,568.69
Street light equipment, regular	1,402.87	894.34	181.19	3,043.05	1,042.37
Street light equipment, ornamental					
Miscellaneous construction expense	717.66	1,554.01	310.45	4,211.72	1,624.05
Steam or hydraulic plant				13,388.68	
Old plant	4,445.68	433.78		3,800.00	3,049.47
Total plant	29,765.68	18,032.04	7,514.68	109.720.04	43,257.18
Bank and cash balance	2,956.87	1,733.88	279.37	11,972.99	36.09
Securities and investments	5,000.00	2,500.00		20,000.00	19,000.00
Accounts receivable	646.59	1,322.62	1,707.61	330.94	984.90
Inventories				3,230.31	
Sinking fund on local debentures					
Equity in H-E.P.C. systems	15,086.00	8,154.15	7,512.59	84,627.36	39,953.95
Other assets					
Total assets	53,455.14	31,742.69	17,014.25	229,881.64	103,232.12
Deficit					
Total	53,455.14	31,742.69	17,014.25	229,881.64	103,232.12
Liabilities					
Debenture balance		3,845.20	927.97		3,540.40
Accounts payable				2,511.46	
Bank overdraft					
Other liabilities	204.00	42.53	42.57	2,094.13	202.18
Total liabilities	204.00	3,887.73	970.54	4,605.59	3,742.58
Reserves					
For equity in H-E.P.C. systems	15,086.00	8,154.15	7,512.59	84,627.36	39,953.95
For depreciation	9,088.26	3,975.96	3,841.53	31,830.59	14,400.94
Other reserves	130.12		22.88		128.53
Total reserves	24,304.38	12,130.11	11,377.00	116,457.95	54,483.42
Surplus					
Debentures paid	11,187.80	12,654.80	2,158.51	5,000.00	10,459.60
Local sinking fund					
Operating surplus	17,758.96	3,070.05	2,508.20	103,818.10	34,546.52
Total surplus	28,946.76	15,724.85	4,666.71	108,818.10	45,006.12
Total liabilities, reserves and surplus	53,455.14	31,742.69	17,014.25	229,881.64	103,232.12
Percentage of net debt to total assets	0.5	16.5	10.2	3.2	5.9

"A"—Continued

Hydro Municipalities as at December 31, 1938

Tillsonburg 3,828	Toronto 648,309	Toronto Twp.	Trafalgar Twp. Area No. 1	Trafalgar Twp. Area No. 2	Wallaceburg 4,537	Wardsville 243
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
4,824.27	5,466,029.43	6,736.78	....	....	38,331.72	....
29,598.71	14,637,890.37	....	....	....	11,287.22	....
47,176.81	6,639,241.18	195,876.39	22,736.45	12,014.75	59,889.14	5,180.12
....	4,115,730.07	....	....	....	....	....
18,410.93	3,646,378.08	67,908.77	9,949.56	2,391.94	35,831.25	1,501.32
19,519.63	3,204,362.16	38,048.52	5,152.37	1,674.86	21,343.44	1,308.68
11,991.49	501,959.26	3,717.44	....	....	10,935.28	519.36
....	....	....	....	....	....	....
3,576.98	2,642,668.45	7,451.32	1,729.27	350.38	3,100.24	506.73
....	....	....	....	....	....	....
....	3,570,474.01	619.65	....	....	20,941.07	193.94
135,098.82	44,424,733.01	320,358.87	39,567.65	16,431.93	201,659.36	9,210.15
50.00	989,887.60	17,978.41	1,788.65	2,705.81	20,550.13	1,349.28
9,000.00	1,156,018.60	10,000.00	4,000.00	4,000.00	20,000.00	....
4,985.07	1,931,924.29	1,587.93	542.06	239.67	12,834.54	1,212.53
5,289.15	543,932.87	....	....	....	7,913.77	....
....	7,742,398.38	....	....	....	....	....
75,354.93	16,197,463.50	91,801.04	2,195.95	685.22	161,185.99	3,148.28
....	9,165.15	....	....	....	....	....
229,777.97	72,995,523.40	441,726.25	48,094.31	24,062.63	424,143.79	14,920.24
....	....	....	....	....	....	....
229,777.97	72,995,523.40	441,726.25	48,094.31	24,062.63	424,143.79	14,920.24
4,234.12	19,548,140.02	33,643.79	7,146.67	9,461.15	28,242.27	1,864.19
27.15	1,746,712.20	4,699.78	....	39.50	....	15.14
5,286.62	....	....	....	....	....	....
3,524.90	155,935.14	2,973.42	....	....	2,438.29	....
13,072.79	21,450,787.36	41,316.99	7,146.67	9,500.65	30.680.56	1,879.33
75,354.93	16,197,463.50	91,801.04	2,195.95	685.22	161,185.99	3,148.28
38,681.50	9,103,162.43	123,869.98	17,165.86	2,694.65	58,966.38	3,058.74
906.06	1,192,632.16	232.47	....	....	1,312.03	....
114,942.49	26,493,258.09	215,903.49	19,361.81	3,379.87	221,464.40	6,207.02
31,765.88	14,813,928.35	70,356.21	12,279.74	....	43,294.31	5,698.21
....	7,742,398.38	....	....	....	....	....
69,996.81	2,495,151.22	114,149.56	9,306.09	11,182.11	128,704.52	1,135.68
101,762.69	25,051,477.95	184,505.77	21,585.83	11,182.11	171,998.83	6,833.89
229,777.97	72,995,523.40	441,726.25	48,094.31	24,062.63	424,143.79	14,920.24
8.5	27.9	11.8	15.6	40.6	11.7	16.0

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Waterdown	Waterford	Waterloo	Watford	Welland
Population	885	1,238	8,425	975	10,924
Assets	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	200.00	1,256.52	14,454.37		75,313.71
Substation equipment			64,325.51		96,884.48
Distribution system—overhead	16,033.98	16,491.07	97,237.15	17,053.18	134,731.40
Distribution system—underground					7,475.04
Line Transformers	6,895.38	7,857.62	51,869.56	7,018.62	58,938.03
Meters	6,418.00	6,450.14	38,260.14	5,608.73	59,941.54
Street light equipment, regular	583.81	3,231.62	14,218.91	2,113.39	4,265.01
Street light equipment, ornamental			3,106.80		36,513.75
Miscellaneous construction expense	149.14	743.45	11,196.60	2,251.33	10,936.00
Steam or hydraulic plant					
Old plant			23,880.17	657.44	49,876.19
Total plant	30,280.31	36,030.42	318,549.21	34,702.69	534,875.15
Bank and cash balance	7,395.89	1,446.76	7,842.60	622.85	17,138.87
Securities and investments		5,300.00	35,000.00	6,800.00	11,580.17
Accounts receivable	1,347.16	791.22	1,769.06	2,296.09	14,356.78
Inventories			488.86	147.54	10,773.12
Sinking fund on local debentures			15,290.24		107,581.21
Equity in H-E.P.C. systems	19,935.44	27,720.56	224,717.52	19,789.86	259,479.20
Other assets					150.82
Total assets	58,958.80	71,288.96	603,657.49	64,359.03	955,935.32
Deficit					
Total	58,958.80	71,288.96	603,657.49	64,359.03	955,935.32
Liabilities					
Debenture balance			29,144.10		164,508.30
Accounts payable			3,384.13		10,167.47
Bank overdraft					
Other liabilities	121.10		3,106.80	250.84	44,381.13
Total liabilities	121.10		35,635.03	250.84	219,056.90
Reserves					
For equity in H-E.P.C. systems	19,935.44	27,720.56	224,717.52	19,789.86	259,479.20
For depreciation	8,352.92	12,354.50	129,475.05	9,238.04	147,761.51
Other reserves			249.09	66.29	3,355.80
Total reserves	28,288.36	40,075.06	354,441.66	29,094.19	410,596.51
Surplus					
Debentures paid	8,000.00	7,745.53	76,855.90	9,713.21	110,491.70
Local sinking fund			15,290.24		107,581.21
Operating surplus	22,549.34	23,468.37	121,434.66	25,300.79	108,209.00
Total surplus	30,549.34	31,213.90	213,580.80	35,014.00	326,281.91
Total liabilities, reserves and surplus	58,958.80	71,288.96	603,657.49	64,359.03	955,935.32
Percentage of net debt to total assets	0.3	0.0	4.8	0.6	13.6

"A"—Continued

Hydro Municipalities as at December 31, 1938

Wellesley	West Lorne	Weston	Wheatley	Windsor	Woodbridge	Woodstock
P.V.	784	5,048	744	102,704	831	11,382
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	11,903.31	....	492,265.27	....	40,007.94
....	....	62,938.54	....	1,065,761.62	....	121,390.93
7,289.77	11,927.29	61,994.58	16,038.75	1,235,116.52	17,246.53	120,243.72
....	....	....	....	143,231.71	....	....
2,175.97	4,326.79	39,276.47	4,331.83	551,431.65	6,624.62	62,926.54
2,625.60	3,650.68	26,390.64	4,359.72	508,134.44	4,953.68	60,376.18
545.11	789.45	29,819.70	1,738.74	56,239.31	574.03	15,747.35
....	....	....	....	1,021,495.33	....	....
270.42	347.14	13,858.80	986.14	191,742.59	989.63	9,232.17
....	....	....	....	....	....	....
....	1,250.00	....	2,569.50	167,429.04	....	....
12,906.87	22,291.35	246,182.04	30,024.68	5,432,847.48	30,388.49	429,924.83
2,374.86	3,769.21	75.00	1,636.30	206,806.38	2,564.12	30,304.61
1,000.00	....	....	5,500.00	469,952.17	....	84,000.00
511.78	424.18	1,274.81	1,475.57	243,360.03	894.29	2,946.59
....	53.45	356.22	61.92	131,823.38	....	784.81
....	....	....	....	49,699.16	....	16,313.22
14,493.01	22,542.40	202,504.98	11,305.94	2,627,410.05	26,117.47	340,738.80
....	....	....	40.00	....	....	....
31,286.52	49,080.59	450,393.05	50,044.41	9,161,898.65	59,964.37	905,012.86
....	....	....	....	....	....	....
31,286.52	49,080.59	450,393.05	50,044.41	9,161,898.65	59,964.37	905,012.86
....	....	20,706.30	4,645.35	986,738.83	3,323.62	19,205.42
....	253.11	13,397.54	174.92	86,760.91	252.79	1,284.83
....	....	2,651.59	....	....	....	....
....	100.00	2,683.21	30.00	1,127,050.50	469.01	7,365.23
....	353.11	39,438.64	4,850.27	2,200,550.24	4,045.42	27,855.48
14,493.01	22,542.40	202,504.98	11,305.94	2,627,410.05	26,117.47	340,738.80
3,573.97	8,789.10	41,174.74	5,625.69	1,041,767.83	10,294.77	181,521.78
....	43.14	689.71	....	269,200.40	....	16,824.30
18,066.98	31,374.64	244,369.43	16,931.63	3,938,378.28	36,412.24	539,084.88
7,500.00	8,000.00	49,326.14	8,354.65	1,597,093.22	5,176.35	108,180.21
....	....	....	....	49,699.16	....	16,313.22
5,719.54	9,352.84	117,258.84	19,907.86	1,376,177.75	14,330.36	213,579.07
13,219.54	17,352.84	166,584.98	28,262.51	3,022,970.13	19,506.71	338,072.50
31,286.52	49,080.59	450,393.05	50,044.41	9,161,898.65	59,964.37	905,012.86
0.0	1.3	15.9	12.5	20.6	12.0	2.1

STATEMENT

Balance Sheets of Electrical Departments of

NIAGARA SYSTEM—Concluded

Municipality	Wyoming	York Twp.	Zurich	NIAGARA SYSTEM SUMMARY
Population	528		P.V.	
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and buildings	....	....	....	9,161,857.33
Substation equipment	....	....	....	21,518,978.96
Distribution system—overhead	8,807.68	678,356.98	7,201.33	18,332,940.41
Distribution system—underground	....	....	....	5,693,044.93
Line transformers	1,493.02	....	2,237.83	8,844,648.80
Meters	2,734.30	....	2,412.93	7,704,254.02
Street light equipment, regular	336.65	50,031.70	471.82	1,903,313.78
Street light equipment, ornamental	....	....	....	1,516,059.81
Miscellaneous construction expense	805.20	16,837.72	270.40	3,927,092.85
Steam or hydraulic plant	....	....	....	24,030.23
Old plant	....	....	150.00	4,375,623.75
Total plant	14,176.85	745,226.40	12,744.31	83,001,844.87
Bank and cash balance	1,524.50	143,108.96	630.32	2,521,566.51
Securities and investments	....	....	4,000.00	2,928,714.43
Accounts receivable	234.40	....	674.78	3,455,609.56
Inventories	....	....	....	1,200,903.81
Sinking fund on local debentures	....	....	....	9,351,560.77
Equity in H-E.P.C. systems	7,162.83	529,327.79	11,461.36	38,546,153.06
Other assets	....	14,260.21	....	127,957.54
Total assets	23,098.58	1,431,923.36	29,510.77	141,134,310.55
Deficit	....	....	....	1,106.15
Total	23,098.58	1,431,923.36	29,510.77	141,135,416.70
LIABILITIES				
Debenture balance	....	213,805.95	2,714.44	27,236,808.92
Accounts payable	661.96	25,198.84	13.05	2,967,725.62
Bank overdraft	....	....	....	71,178.78
Other liabilities	45.00	....	30.00	2,970,587.05
Total liabilities	706.96	239,004.79	2,757.49	33,246,300.37
RESERVES				
For equity in H-E.P.C. systems	7,162.83	529,327.79	11,461.36	38,546,153.06
For depreciation	4,579.84	224,922.74	6,019.95	18,511,277.24
Other reserves	....	....	....	2,265,981.43
Total reserves	11,742.67	754,250.53	17,481.31	59,323,411.73
SURPLUS				
Debentures paid	9,700.00	275,568.70	2,877.17	26,126,603.47
Local sinking fund	....	....	....	9,351,560.77
Operating surplus	948.95	163,099.34	6,394.80	13,087,540.36
Total surplus	10,648.95	438,668.04	9,271.97	48,565,704.60
Total liabilities, reserves and surplus	23,098.58	1,431,923.36	29,510.77	141,135,416.70
Percentage of net debt to total assets	4.4	26.5	15.3	24.4

"A"—Continued

Hydro Municipalities as at December 31, 1938

GEORGIAN BAY SYSTEM

Alliston 1,340	Arthur 1,035	Barrie 8,135	Beaverton 949	Beeton 555	Bradford 988	Brechin P.V.	Cannington 764
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	16,415.88	299.50	....	....	....	....
675.73	....	15,285.02	....	428.50	388.50	....	....
27,869.88	17,594.00	62,380.70	24,971.87	11,868.81	20,058.73	2,269.14	11,223.77
....	....	66,437.67	....	....	....	....	....
7,226.37	4,362.24	43,728.86	8,070.64	2,565.19	4,677.65	1,266.71	4,262.88
7,217.96	4,145.32	43,662.34	6,466.13	2,152.10	4,699.04	741.31	4,607.21
1,549.02	796.21	12,311.35	1,267.25	1,169.54	544.95	239.08	953.27
....	....	....	....	....	....	....	....
2,762.77	337.13	11,401.52	2,515.18	1,599.60	2,076.66	546.92	653.58
....	....	....	....	....	....	....	....
7,846.49	1,086.62	....	3,772.42	....	....	....	3,609.37
55,148.22	28,321.52	271,623.34	47,362.99	19,783.74	32,445.53	5,063.16	25,310.08
3,340.87	1,676.54	2,690.23	3,076.96	3,514.89	5,799.30	1,371.27	1,955.56
....	....	9,000.00	7,000.00	....	1,000.00	....	2,326.62
3,225.36	1,461.02	14,797.28	2,395.65	1,638.55	3,185.00	808.58	760.28
....	....	2,417.39	....	....	....	....	147.15
....	....	....	....	....	....	....	....
19,510.76	16,978.45	125,196.57	18,104.00	13,701.27	15,694.62	6,887.03	13,693.04
850.51	250.00	2,107.57	205.78	....	95.30	....	551.80
82,075.72	48,687.53	427,832.38	78,145.38	38,638.45	58,219.75	14,130.04	44,744.53
....	8,888.65	....	....	....	....	....	....
82,075.72	57,576.18	427,832.38	78,145.38	38,638.45	58,219.75	14,130.04	44,744.53
17,589.36	13,349.57	14,690.95	3,416.42	7,534.65	13,165.94	1,569.23	4,371.45
....	....	668.72	792.64	556.60	531.57	420.46	96.60
....	....	....	....	....	....	....	....
15.00	250.00	2,493.12	516.59	....	160.00	24.85	54.00
17,604.36	13,599.57	17,852.79	4,725.65	8,091.25	13,857.51	2,014.54	4,522.05
19,510.76	16,978.45	125,196.57	18,104.00	13,701.27	15,694.62	6,887.03	13,693.04
17,531.55	15,347.73	88,931.44	13,738.85	8,970.83	11,714.82	2,308.47	10,903.62
93.72	....	3,050.06	225.00	....	60.00	....	169.74
37,136.03	32,326.18	217,178.07	32,067.85	22,672.10	27,469.44	9,195.50	24,766.40
22,410.64	11,650.43	50,674.73	11,583.58	7,465.35	12,034.06	1,641.69	10,628.55
....	....	....	....	....	....	....	....
4,924.69	....	142,126.79	29,768.30	409.75	4,858.74	1,278.31	4,827.53
27,335.33	11,650.43	192,801.52	41,351.88	7,875.10	16,892.80	2,920.00	15,456.08
82,075.72	57,576.18	427,832.38	78,145.38	38,638.45	58,219.75	14,130.04	44,744.53
28.1	42.9	5.9	7.9	32.4	32.6	27.8	14.6

STATEMENT

Balance Sheets of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality Population	Chatsworth 321	Chesley 1,815	Coldwater 589	Collingwood 5,478	Cookstown P.V.
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	364.89	6,000.00	275.00	15,950.08	70.00
Substation equipment	....	2,305.58	....	11,203.24	392.95
Distribution system—overhead	5,092.56	21,188.95	8,964.22	50,551.05	9,649.63
Distribution system—underground	....	....	....	....	....
Line Transformers	1,639.93	7,311.13	2,920.61	19,231.96	2,512.10
Meters	1,667.11	7,187.05	2,994.45	22,961.68	2,217.67
Street light equipment, regular	529.17	1,441.82	775.02	2,896.16	902.02
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	394.84	3,695.34	303.08	2,061.71	1,540.29
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	5,503.60	....	....	....
Total plant	9,688.50	54,633.47	16,232.38	124,855.88	17,284.66
Bank and cash balance	2,570.85	15.00	121.97	857.44	2,229.22
Securities and investments	....	5,000.00	4,000.00	24,000.00	3,000.00
Accounts receivable	1,239.18	1,241.07	3,571.71	12,684.86	1,229.51
Inventories	....	264.79	....	51.58	....
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	3,760.62	31,042.85	12,994.76	119,660.45	4,540.92
Other assets	....	249.55	363.98	444.71	63.57
Total assets	17,259.15	92,446.73	37,284.80	282,554.92	28,347.88
Deficit	....	....	....	....	....
Total	17,259.15	92,446.73	37,284.80	282,554.92	28,347.88
LIABILITIES					
Debenture balance	113.99	....	2,056.66	....	4,840.95
Accounts payable	3.36	249.55	1,559.22	64.61	....
Bank overdraft	....	1,403.78	....	....	....
Other liabilities	82.50	....	202.00	2,179.99	20.00
Total liabilities	199.85	1,653.33	3,817.88	2,244.60	4,860.95
RESERVES					
For equity in H-E.P.C. systems	3,760.62	31,042.85	12,994.76	119,660.45	4,540.92
For depreciation	3,209.13	18,689.15	9,358.64	58,639.67	7,429.14
Other reserves	....	....	70.43	446.45	....
Total reserves	6,969.75	49,732.00	22,423.83	178,746.57	11,970.06
SURPLUS					
Debentures paid	5,286.01	27,500.00	4,943.34	38,183.42	8,659.05
Local sinking fund	....	....	....	....	....
Operating surplus	4,803.54	13,561.40	6,099.75	63,380.33	2,857.82
Total surplus	10,089.55	41,061.40	11,043.09	101,563.75	11,516.87
Total liabilities, reserves and surplus	17,259.15	92,446.73	37,284.80	282,554.92	28,347.88
Percentage of net debt to total assets	1.5	2.7	15.7	1.4	20.4

"A"—Continued

Hydro Municipalities as at December 31, 1938

Creemore 632	Dundalk 666	Durham 1,852	Elmvale P.V.	Elmwood P.V.	Flesherton 447	Grand Valley 600	Graven-hurst 2,052
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	56.59	106.25	....	392.52	36.50	8,906.15
....	....	546.02	2,273.07	....	....	....	10,986.03
7,644.47	8,228.20	22,361.89	9,451.04	4,871.52	5,938.38	11,540.48	33,420.87
....	....	....	....	....	....	....	1,941.77
3,676.20	3,761.90	8,165.09	4,517.64	833.38	1,797.67	2,179.63	13,081.92
3,099.60	2,843.44	7,632.54	3,808.48	1,183.41	2,322.87	3,235.44	11,733.74
358.56	1,094.60	1,521.57	447.17	330.56	720.51	987.12	4,442.48
....	....	....	....	....	....	....	....
36.62	317.93	1,610.15	528.04	1,093.62	1,053.35	222.08	2,981.23
....	....	....	....	....	....	....	....
....	....	2,091.39	....	....	....	....	18,130.29
14,815.45	16,246.07	43,985.24	21,131.69	8,312.49	12,225.30	18,201.25	105,624.48
1,031.51	3,231.33	4,650.79	3,312.28	1,570.11	835.86	2,008.19	1,206.93
3,000.00	3,000.00	7,000.00	2,500.00	3,000.00	4,000.00	5,128.60	....
1,327.08	657.54	1,397.77	761.23	270.48	697.09	673.20	3,193.04
....	6.50	631.99	....	....	....	....	803.39
....	....	....	....	470.40	....	....	10,274.02
10,362.51	10,633.46	27,269.42	13,357.70	3,514.67	5,817.84	10,452.75	22,884.94
....	....	98.36	61.01	....	....	....	797.20
30,536.55	33,774.90	85,033.57	41,123.91	17,138.15	23,576.09	36,463.99	144,784.00
....	....	....	....	....	....	....	....
30,536.55	33,774.90	85,033.57	41,123.91	17,138.15	23,576.09	36,463.99	144,784.00
....	....	....	1,614.65	700.04	2,262.08	....	10,000.00
46.88	6.25	22.16	49.99	27.31	10.60	623.29	7,541.23
....	....	....	....	....	....	....	....
132.00	....	....	23.00	....	....	....	587.50
178.88	6.25	22.16	1,687.64	727.35	2,272.68	623.29	18,128.73
10,362.51	10,633.46	27,269.42	13,357.70	3,514.67	5,817.84	10,452.75	22,884.94
5,262.54	5,968.24	14,463.52	9,928.97	3,940.09	4,778.21	7,889.44	22,393.42
....	....	....	50.00	....	332.24	....	632.44
15,625.05	16,601.70	41,732.94	23,336.67	7,454.76	10,928.29	18,342.19	45,910.80
2,823.61	5,955.96	25,800.00	5,385.35	6,499.96	4,437.92	11,000.00	53,968.41
....	....	....	....	470.40	....	....	10,274.02
11,909.01	11,210.99	17,478.47	10,714.25	1,985.68	5,937.20	6,498.51	16,502.04
14,732.62	17,166.95	43,278.47	16,099.60	8,956.04	10,375.12	17,498.51	80,744.47
30,536.55	33,774.90	85,033.57	41,123.91	17,138.15	23,576.09	36,463.99	144,784.00
0.9	0.0	0.0	6.1	2.0	12.8	2.4	7.0

STATEMENT

Balance Sheets of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality	Hanover	Holstein	Huntsville	Kincardine	Kirkfield
Population	3,191	P.V.	2,707	2,458	P.V.
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	3,001.32	....	353.52	6,531.80	....
Substation equipment	9,271.19	....	647.30	2,794.20	....
Distribution system—overhead	50,130.92	2,117.63	21,078.72	43,909.02	5,157.99
Distribution system—underground	....	....	....	....	....
Line transformers	19,660.33	685.79	10,933.92	11,894.65	557.90
Meters	16,778.14	651.36	11,891.61	11,698.13	737.11
Street light equipment, regular	2,350.30	170.44	7,348.39	5,864.19	379.00
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	6,639.90	189.35	1,165.64	5,334.32	301.53
Steam or hydraulic plant	....	....	....	....	....
Old plant	2,370.91	....	5,226.20	....	....
Total plant	110,203.01	3,814.57	58,645.30	88,026.31	7,133.53
Bank and cash balance	2,718.12	732.13	573.76	2,299.17	1,098.09
Securities and investments	25,059.38	1,500.00	11,207.42	....	....
Accounts receivable	5,496.78	22.75	3,371.50	5,313.77	386.66
Inventories	....	....	2,904.64	500.37	....
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	71,129.41	2,354.00	49,876.98	35,154.02	2,777.48
Other assets	888.10	....	335.96	1,154.38	....
Total assets	215,494.80	8,423.45	126,915.56	132,448.02	11,395.76
Deficit	....	....	....	....	1,573.97
Total	215,494.80	8,423.45	126,915.56	132,448.02	12,969.73
LIABILITIES					
Debenture balance	6,019.68	....	235.40	12,259.92	493.46
Accounts payable	524.99	294.71	31.27	29.00	1,115.97
Bank overdraft	....	....	....	....	....
Other liabilities	19.00	....	882.66	....	....
Total liabilities	6,563.67	294.71	1,149.33	12,288.92	1,609.43
RESERVES					
For equity in H-E.P.C. systems	71,129.41	2,354.00	49,876.98	35,154.02	2,777.48
For depreciation	52,459.63	1,583.90	13,077.69	26,670.83	3,076.28
Other reserves	....	....	2,800.00	....	....
Total reserves	123,589.04	3,937.90	65,754.67	61,824.85	5,853.76
SURPLUS					
Debentures paid	81,480.32	2,762.05	20,898.14	51,940.08	5,506.54
Local sinking fund	....	....	....	....	....
Operating surplus	3,861.77	1,428.79	39,113.42	6,394.17	....
Total surplus	85,342.09	4,190.84	60,011.56	58,334.25	5,506.54
Total liabilities, reserves and surplus	215,494.80	8,423.45	126,915.56	132,448.02	12,969.73
Percentage of net debt to total assets	4.5	4.9	1.5	12.6	18.7

"A"—Continued

Hydro Municipalities as at December 31, 1938

Lucknow 1,036	Markdale 781	Meaford 2,719	Midland 6,669	Mildmay 746	Mount Forest 1,946	Neustadt 441	Orangeville 2,479
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	1,144.18	19,983.57	....	3,725.00	....	2,585.07
....	780.80	3,849.47	85,096.20	....	686.75	....	1,169.00
18,187.64	10,598.21	32,355.73	95,550.20	6,103.22	23,141.34	9,995.44	34,898.91
....	....	....	....	....	....	....	....
5,244.47	4,151.74	8,489.97	24,740.53	1,657.05	7,264.19	4,146.92	9,222.03
5,027.79	4,020.82	8,530.42	38,098.51	2,699.64	8,189.23	2,213.67	12,865.50
1,475.15	1,390.15	3,388.35	19,139.42	561.88	2,397.89	496.41	7,532.55
....	....	....	....	....	....	....	....
2,415.24	635.80	2,477.22	4,073.00	1,337.91	2,250.59	1,510.48	6,328.26
....	....	....	....	....	....	....	....
....	2,080.65	3,452.38	....	849.00	3,810.95	1,097.60	3,204.99
32,350.29	23,658.17	63,687.72	286,681.43	13,208.70	51,465.94	19,460.52	77,806.31
2,912.89	1,963.96	2,013.04	11,019.87	1,478.06	1,321.72	2,390.77	1,718.32
3,000.00	4,255.13	15,299.90	40,932.13	2,500.00	4,000.00	2,000.00	9,500.00
2,788.23	1,968.02	2,934.99	11,314.95	732.38	1,822.99	578.34	2,995.44
....	....	....	3,068.68	....	28.00	41.94	416.24
....	....	....	....	....	....	....	....
16,495.19	8,657.55	24,456.63	189,935.15	2,073.55	27,365.76	5,804.97	37,309.33
....	....	128.44	1,398.44	....	....	....	307.00
57,546.60	40,502.83	108,520.72	544,350.65	19,992.69	86,004.41	30,276.54	130,052.64
....	....	....	....	....	....	1,804.09	....
57,546.60	40,502.83	108,520.72	544,350.65	19,992.69	86,004.41	32,080.63	130,052.64
5,091.84	3,650.60	22,226.75	....	9,955.24	7,982.18	959.15	182.70
1,014.71	791.94	82.36	51.55	8.73	1,500.00	....	22.26
....	....	....	....	....	....	....	....
....	22.00	1,291.01	856.95	....	....	....	5.00
6,106.55	4,464.54	23,600.12	908.50	9,963.97	9,482.18	959.15	209.96
16,495.19	8,657.55	24,456.63	189,935.15	2,073.55	27,365.76	5,804.97	37,309.33
8,412.92	7,252.22	13,174.16	158,628.98	1,398.00	18,792.93	9,275.66	26,568.39
....	....	65.00	2,894.54	....	....	....	....
24,908.11	15,909.77	37,695.79	351,458.67	3,471.55	46,158.69	15,080.63	63,877.72
14,631.52	5,349.40	27,133.45	111,944.99	2,348.26	22,976.42	16,040.85	35,717.30
....	....	....	....	....	....	....	....
11,900.42	14,779.12	20,091.36	80,038.49	4,208.91	7,387.12	....	30,247.66
26,531.94	20,128.52	47,224.81	191,983.48	6,557.17	30,363.54	16,040.85	65,964.96
57,546.60	40,502.83	108,520.72	544,350.65	19,992.69	86,004.41	32,080.63	130,052.64
14.9	14.0	28.0	0.3	55.6	16.2	3.9	0.2

STATEMENT

Balance Sheets of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality Population	Owen Sound 13,118	Paisley 773	Penetanguishene 4,177	Port Elgin 1,293	Port McNicoll 911
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	26,023.81	....	2,288.05	111.25	369.08
Substation equipment	15,131.59	1,923.46	7,106.39	....	....
Distribution system—overhead	111,721.66	11,737.20	47,585.44	26,858.79	8,901.98
Distribution system—underground	....	....	....	....	....
Line Transformers	49,711.01	1,715.03	19,023.70	6,400.57	1,400.23
Meters	61,157.12	3,143.39	15,247.34	7,102.54	2,660.40
Street light equipment, regular	30,354.14	1,045.51	3,829.44	2,270.59	614.82
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	3,864.69	786.65	1,306.58	1,265.69	767.64
Steam or hydraulic plant	33,282.00	....	....	....	....
Old plant	....	1,745.00	....	4,213.00	....
Total plant	331,246.02	22,096.24	96,386.94	48,222.43	14,714.15
Bank and cash balance	....	1,110.14	2,748.29	4,178.24	1,282.86
Securities and investments	37,000.00	4,000.00	1,016.65	10,000.00	....
Accounts receivable	13,263.91	1,335.21	6,574.54	414.50	269.61
Inventories	9,752.48	....	68.77	....	....
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	174,616.20	9,344.82	54,827.33	7,763.52	5,411.07
Other assets	381.19	....	241.86	....	....
Total assets	566,259.80	37,886.41	161,864.38	70,578.69	21,677.69
Deficit	....	....	....	....	....
Total	566,259.80	37,886.41	161,864.38	70,578.69	21,677.69
LIABILITIES					
Debenture balance	....	5,717.37	6,042.01	29,870.68	553.20
Accounts payable	145.80	....	667.07	3,600.07	....
Bank overdraft	7,548.47	....	....	....	....
Other liabilities	4,590.81	65.00	407.50	....	110.00
Total liabilities	12,285.08	5,782.37	7,116.58	33,470.75	663.20
RESERVES					
For equity in H-E.P.C. systems	174,616.20	9,344.82	54,827.33	7,763.52	5,411.07
For depreciation	69,829.27	6,021.45	40,238.31	6,578.52	4,986.91
Other reserves	10,737.29	....	1,600.00	....	....
Total reserves	255,182.76	15,366.27	96,665.64	14,342.04	10,397.98
SURPLUS					
Debentures paid	141,000.00	10,282.63	30,940.94	12,129.32	6,746.80
Local sinking fund	....	....	....	....	....
Operating surplus	157,791.96	6,455.14	27,141.22	10,636.58	3,869.71
Total surplus	298,791.96	16,737.77	58,082.16	22,765.90	10,616.51
Total liabilities, reserves and surplus	566,259.80	37,886.41	161,864.38	70,578.69	21,677.69
Percentage of net debt to total assets	3.1	20.3	6.6	53.3	4.1

"A"—Continued

Hydro Municipalities as at December 31, 1938

Port Perry 1,118	Priceville P.V.	Ripley 432	Rosseau 300	Shelburne 1,099	Southampton 1,202	Stayner 1,034	Sunderland P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	68.00	....	....	800.00	25.00	....	....
2,564.65	....	....	....	566.60	....	200.00	....
19,854.99	5,191.63	10,037.32	7,326.91	15,021.74	25,342.80	15,667.61	4,264.49
....	....	....	....	....	....	....	....
5,099.65	702.86	3,693.93	2,204.63	6,124.57	7,028.23	6,272.61	1,523.48
4,341.30	470.60	1,708.18	1,158.48	6,538.06	8,452.66	6,308.01	2,167.82
1,695.79	139.88	844.33	623.60	1,059.60	2,275.72	1,003.31	627.74
....	....	....	....	....	....	....	....
143.17	833.90	1,231.55	1,265.00	2,223.26	1,352.18	428.63	181.42
....	....	....	....	....	....	....	....
....	....	....	....	739.50	2,477.00	....	2,030.00
33,699.55	7,406.87	17,515.31	12,578.62	33,073.33	46,953.59	29,880.17	10,794.95
1,036.93	360.61	2,792.10	1,257.48	1,747.07	1,267.18	904.61	1,240.93
10,000.00	....	....	....	7,500.00	....	4,000.00	....
764.79	289.73	864.99	691.50	640.83	916.78	1,460.91	366.83
....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....
14,416.65	822.68	6,519.08	2,636.55	16,422.06	6,933.46	14,109.02	9,041.00
....	....	....	72.80	202.50	....	....	142.08
59,917.92	8,879.89	27,691.48	17,236.95	59,585.79	56,071.01	50,354.71	21,585.79
....	1,399.37	....	90.07	....	....	....	....
59,917.92	10,279.26	27,691.48	17,327.02	59,585.79	56,071.01	50,354.71	21,585.79
10,494.74	959.17	8,108.06	11,007.86	396.23	16,258.72	....	....
1,193.43	5.92	....	3.00	964.42	28.12	136.32	16.92
....	....	....	....	....	....	....	....
628.00	....	180.83	....	50.98	10.67	195.00	....
12,316.17	965.09	8,288.89	11,010.86	1,411.63	16,297.51	331.32	16.92
14,416.65	822.68	6,519.08	2,636.55	16,422.06	6,933.46	14,109.02	9,041.00
9,250.86	2,450.66	5,401.31	1,687.47	14,430.88	4,900.86	12,327.98	4,749.44
....	....	....	....	....	....	60.00	....
23,667.51	3,273.34	11,920.39	4,324.02	30,852.94	11,834.32	26,497.00	13,790.44
9,386.92	6,040.83	5,863.88	1,992.14	19,523.77	16,741.21	9,867.59	6,800.00
....	....	....	....	....	....	....	....
14,547.32	....	1,618.32	....	7,797.45	11,197.97	13,658.80	978.43
23,934.24	6,040.83	7,482.20	1,992.14	27,321.22	27,939.18	23,526.39	7,778.43
59,917.92	10,279.26	27,691.48	17,327.02	59,585.79	56,071.01	50,354.71	21,585.79
27.1	10.9	39.1	75.4	3.3	33.2	0.9	0.1

STATEMENT

Balance Sheets of Electrical Departments of

GEORGIAN BAY SYSTEM—Concluded

Municipality	Tara	Teeswater	Thornton	Tottenham	Uxbridge
Population	472	838	P.V.	526	1,527
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings					40.00
Substation equipment		330.31		358.50	2,657.65
Distribution system—overhead	11,206.46	17,544.06	6,490.82	8,455.96	14,791.07
Distribution system—underground					
Line transformers	2,697.42	5,362.15	1,015.06	1,376.38	4,135.02
Meters	1,862.85	3,643.86	924.56	2,273.51	5,219.99
Street light equipment, regular	2,602.39	1,488.82	381.95	466.26	1,489.77
Street light equipment, ornamental					
Miscellaneous construction expense	1,436.84	1,842.49	300.35	1,329.73	1,004.12
Steam or hydraulic plant					
Old plant		4,976.86		286.45	
Total plant	19,805.96	35,188.55	9,112.74	14,546.79	29,337.62
Bank and cash balance	2,810.90	383.54	875.79	1,229.14	3,627.84
Securities and investments		2,500.00			
Accounts receivable	479.69	1,125.91	842.15	1,488.42	1,191.01
Inventories	11.23				
Sinking fund on local debentures					
Equity in H-E.P.C. systems	7,309.52	10,461.94	2,885.19	9,169.54	15,217.55
Other assets				100.10	145.01
Total assets	30,417.30	49,659.94	13,715.87	26,533.99	49,519.03
Deficit	649.09		2,138.67	2,253.94	
Total	31,066.39	49,659.94	15,854.54	28,787.93	49,519.03
LIABILITIES					
Debenture balance	1,236.05	5,288.06	849.69	5,378.06	
Accounts payable	469.64		59.25	32.72	100.00
Bank overdraft					
Other liabilities		33.00		306.00	288.85
Total liabilities	1,705.69	5,321.06	908.94	5,716.78	388.85
RESERVES					
For equity in H-E.P.C. systems	7,309.52	10,461.94	2,885.19	9,169.54	15,217.55
For depreciation	7,787.23	8,011.23	5,410.10	6,312.57	6,993.71
Other reserves					100.00
Total reserves	15,096.75	18,473.17	8,295.29	15,482.11	22,311.26
SURPLUS					
Debentures paid	14,263.95	22,711.94	6,650.31	7,589.04	16,207.59
Local sinking fund					
Operating surplus		3,153.77			10,611.33
Total surplus	14,263.95	25,865.71	6,650.31	7,589.04	26,818.92
Total liabilities, reserves and surplus	31,066.39	49,659.94	15,854.54	28,787.93	49,519.03
Percentage of net debt to total assets	7.4	13.6	8.4	32.9	1.1

"A"—Continued

Hydro Municipalities as at December 31, 1938

Victoria Harbor 1,092	Walkerton 2,358	Waubaushene P.V.	Wiarton 1,743	Windermere 128	Wingham 2,085	Woodville 418	GEORGIAN BAY SYSTEM SUMMARY
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	....	200.00	....	21,418.30	....	137,541.31
....	....	....	....	....	4,863.91	....	184,482.61
9,888.88	41,887.68	9,477.16	21,477.67	9,498.60	40,549.75	3,317.75	1,234,463.55
....	....	....	....	....	....	....	68,379.44
1,796.97	12,679.21	2,673.79	5,520.77	3,289.95	16,629.49	1,995.54	426,511.44
2,975.69	11,596.67	2,656.46	6,141.51	1,081.83	15,984.07	2,270.56	447,068.28
366.32	2,548.25	303.35	2,121.22	247.26	3,489.76	521.83	150,183.20
....	....	....	....	....	....	....	....
663.80	2,572.26	335.74	5,750.22	525.65	4,651.22	291.11	108,744.77
....	....	....	....	....	14,711.99	....	47,993.99
....	4,897.60	....	2,011.79	....	12,320.02	2,182.50	102,012.58
15,691.66	76,181.67	15,446.50	43,223.18	14,643.29	134,618.51	10,579.29	2,907,381.17
2,342.56	3,402.22	78.69	5,614.38	1,400.06	5,013.60	385.61	126,397.77
....	....	....	10,000.00	....	4,000.00	5,000.00	297,225.83
1,081.57	5,409.32	1,406.82	3,330.33	578.52	6,361.65	1,478.66	149,570.46
....	1,280.41	....	....	....	4,000.05	....	26,395.60
....	....	....	....	....	....	....	10,744.42
5,689.23	12,852.23	3,527.16	10,314.99	1,880.32	30,710.52	8,868.19	1,421,198.47
....	915.86	....	....	....	....	88.53	12,641.59
24,805.02	100,041.71	20,459.17	72,482.88	18,502.19	184,704.33	26,400.28	4,951,555.31
....	....	....	....	....	....	....	18,797.85
24,805.02	100,041.71	20,459.17	72,482.88	18,502.19	184,704.33	26,400.28	4,970,353.16
....	47,487.18	....	29,706.58	9,536.38	27,105.23	1,496.87	383,825.00
124.97	1,410.88	1,747.80	3,001.07	....	56.83	66.87	32,569.63
....	....	....	....	....	....	....	8,952.25
....	118.00	....	40.00	....	580.45	....	17,422.27
124.97	49,016.06	1,747.80	32,747.65	9,536.38	27,742.52	1,563.74	442,769.15
5,689.23	12,852.23	3,527.16	10,314.99	1,880.32	30,710.52	8,868.19	1,421,198.47
5,885.59	7,869.02	2,593.67	4,669.82	2,339.40	34,233.26	2,702.78	959,431.36
....	....	125.00	....	....	....	500.00	24,011.91
11,574.82	20,721.25	6,245.83	14,984.81	4,219.72	64,943.78	12,070.97	2,404,641.74
6,500.00	15,512.82	3,500.00	7,693.42	2,226.92	69,000.27	4,003.13	1,180,436.80
....	....	....	....	....	....	....	10,744.42
6,605.23	14,791.58	8,965.54	17,057.00	2,519.17	23,017.76	8,762.44	931,761.05
13,105.23	30,304.40	12,465.54	24,750.42	4,746.09	92,018.03	12,765.57	2,122,942.27
24,805.02	100,041.71	20,459.17	72,482.88	18,502.19	184,704.33	26,400.28	4,970,353.16
0.7	56.2	10.3	52.7	57.4	18.0	8.9	12.3

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM

Municipality	Alexandria	Apple Hill	Athens	Bath	Belleville
Population	1,919	P.V.	691	346	14,560
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	202.00	169.06			41,461.11
Substation equipment					76,367.97
Distribution system—overhead	28,388.17	2,935.47	14,202.27	6,301.10	119,937.29
Distribution system—underground					
Line Transformers	8,526.59	1,288.37	2,186.03	1,376.40	29,322.91
Meters	7,313.54	1,113.07	3,049.94	792.21	61,875.70
Street light equipment, regular	2,224.20	421.12	698.90	554.37	22,411.43
Street light equipment, ornamental					
Miscellaneous construction expense	5,112.62	265.28	1,011.61	727.38	6,421.72
Steam or hydraulic plant					
Old plant	4,466.89	709.55			
Total plant	56,234.01	6,901.92	21,148.75	9,751.46	357,798.13
Bank and cash balance	5,977.54	1,652.87	691.80	79.94	17,452.16
Securities and investments	5,000.00		3,500.00		5,000.00
Accounts receivable	5,775.27	389.77	2,108.99	35.11	45,769.24
Inventories					9,197.74
Sinking fund on local debentures					
Equity in H-E.P.C. systems	26,692.13	2,815.18	4,977.16	1,618.55	135,803.85
Other assets					
Total assets	99,678.95	11,759.74	32,426.70	11,485.06	571,021.12
Deficit				146.70	
Total	99,678.95	11,759.74	32,426.70	11,631.76	571,021.12
LIABILITIES					
Debenture balance	6,394.97	1,532.53	8,830.36	6,018.43	
Accounts payable		149.23		1,157.21	31,176.87
Bank overdraft					
Other liabilities	529.22			70.00	7,956.53
Total liabilities	6,924.19	1,681.76	8,830.36	7,245.64	39,133.40
RESERVES					
For equity in H-E.P.C. systems	26,692.13	2,815.18	4,977.16	1,618.55	135,803.85
For depreciation	17,658.16	2,230.26	4,089.58	1,286.00	41,810.24
Other reserves	567.98		206.06		2,233.76
Total reserves	44,918.27	5,045.44	9,272.80	2,904.55	179,847.85
SURPLUS					
Debentures paid	41,738.87	4,467.47	5,169.64	1,481.57	176,000.00
Local sinking fund					
Operating surplus	6,097.62	565.07	9,153.90		176,039.87
Total surplus	47,836.49	5,032.54	14,323.54	1,481.57	352,039.87
Total liabilities, reserves and surplus	99,678.95	11,759.74	32,426.70	11,631.76	571,021.12
Percentage of net debt to total assets	9.5	18.8	32.2	73.4	9.0

"A"—Continued

Hydro Municipalities as at December 31, 1938

Bloomfield 666	Bowmanville 3,850	Brighton 1,366	Brockville 9,983	Cardinal 1,529	Carleton Place 4,278	Chesterville 1,068	Cobden 621
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	28,628.36	600.00	45,295.14	....	13,390.32	335.00	....
410.00	894.47	....	23,185.98	....	2,471.63	....	....
11,276.80	49,530.99	15,792.82	95,891.14	13,597.18	44,716.28	10,504.55	3,995.49
....	....	....	....	....	....	....	....
2,251.58	9,419.03	5,533.88	44,495.08	3,359.52	12,390.87	3,688.10	893.01
2,999.15	18,948.13	7,657.61	48,424.37	3,226.21	17,970.16	4,818.87	879.73
908.20	7,857.04	821.98	26,101.73	491.85	6,691.85	593.64	444.46
....	....	....	....	....	....	....	....
1,403.42	5,792.62	995.99	2,942.02	1,057.87	5,992.78	922.50	45.86
....	....	....	46,965.86	....	....	....	....
....	....	....	4,821.76	3,474.80	5,289.19	....	2,853.85
19,249.15	121,070.64	31,402.28	338,123.08	25,207.43	108,913.08	20,862.66	9,112.40
3,359.74	6,243.88	81.40	1,516.97	107.05	2,670.94	551.01	2,580.78
....	....	....	103,000.00	3,000.00	20,000.00	9,000.00	....
317.31	9,073.17	5,026.39	9,761.67	149.57	6,312.18	2,089.44	504.23
....	4,956.21	5,486.02	2,497.59	....	1,486.48	580.36	....
....	....	....	....	....	....	....	....
4,985.86	43,860.54	8,885.98	145,339.54	4,090.60	66,856.86	23,997.27	606.64
....	....	....	....	....	....	....	....
27,912.06	185,204.44	50,882.07	600,238.85	32,554.65	206,239.54	57,080.74	12,804.05
....	....	....	....	....	....	....	....
27,912.06	185,204.44	50,882.07	600,238.85	32,554.65	206,239.54	57,080.74	12,804.05
4,789.22	28,872.63	13,988.91	....	10,068.19	29,242.79	....	5,914.34
....	....	91.28	1,443.33	132.71	....	1,080.64	13.65
....	....	....	....	....	....	....	....
114.00	1,208.97	157.78	42.40	....	1,148.35	....	87.50
4,903.22	30,081.60	14,237.97	1,485.73	10,200.90	30,391.14	1,080.64	6,015.49
4,985.86	43,860.54	8,885.98	145,339.54	4,090.60	66,856.86	23,997.27	606.64
6,726.96	11,390.48	3,358.37	109,969.11	2,000.54	13,479.56	6,424.00	362.29
....	....	645.22	15,150.75	50.00	1,265.58	....	....
11,712.82	55,251.02	12,889.57	270,459.40	6,141.14	81,602.00	30,421.27	968.93
6,410.78	42,127.37	11,011.09	226,657.54	4,931.81	36,757.21	6,500.00	1,888.93
....	....	....	....	....	....	....	....
4,885.24	57,744.45	12,743.44	101,636.18	11,280.80	57,489.19	19,078.83	3,930.70
11,296.02	99,871.82	23,754.53	328,293.72	16,212.61	94,246.40	25,578.83	5,819.63
27,912.06	185,204.44	50,882.07	600,238.85	32,554.65	206,239.54	57,080.74	12,804.05
21.4	21.3	33.9	0.3	35.8	21.8	3.3	49.3

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Cobourg	Colborne	Deseronto	Finch	Hastings
Population	5,125	964	1,300	371	762
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	29,949.68	....	597.41	....	....
Substation equipment	1,668.35	....	161.18	....	....
Distribution system—overhead	76,501.82	10,637.94	10,414.62	7,809.39	16,856.81
Distribution system—underground	....	....	....	....	....
Line transformers	24,023.88	1,117.89	1,702.57	1,968.10	2,508.69
Meters	29,961.57	2,424.10	4,898.29	1,868.82	3,387.16
Street light equipment, regular	12,753.08	1,444.81	432.60	478.87	1,267.44
Street light equipment, ornamental	....	....	....	....	....
Miscellaneous construction expense	5,217.34	3,873.87	450.72	115.08	744.60
Steam or hydraulic plant	....	....	....	....	....
Old plant	....	....	....	....	1,733.13
Total plant	180,075.72	19,498.61	18,657.39	12,240.26	26,497.83
Bank and cash balance	200.00	1,448.21	990.82	823.28	237.00
Securities and investments	....	3,500.00	....	3,000.00	5,500.00
Accounts receivable	17,023.39	283.87	1,117.99	683.78	610.06
Inventories	5,027.16	1,083.29	854.21	....	....
Sinking fund on local debentures	....	....	....	....	....
Equity in H-E.P.C. systems	32,471.66	2,663.53	5,407.46	3,493.86	2,763.88
Other assets	11,515.82	....	....	....	....
Total assets	246,313.75	28,477.51	27,027.87	20,241.18	35,608.77
Deficit	....	....	....	....	....
Total	246,313.75	28,477.51	27,027.87	20,241.18	35,608.77
LIABILITIES					
Debenture balance	83,172.45	10,303.74	2,026.88	4,151.01	16,021.13
Accounts payable	5,879.56	550.91	183.16	....	625.62
Bank overdraft	5,104.04	....	....	....	....
Other liabilities	15,751.21	223.00	272.12	15.00	186.00
Total liabilities	109,907.26	11,077.65	2,482.16	4,166.01	16,832.75
RESERVES					
For equity in H-E.P.C. systems	32,471.66	2,663.53	5,407.46	3,493.86	2,763.88
For depreciation	18,199.21	1,620.00	2,980.92	2,204.63	3,207.78
Other reserves	....	....	....	10.59	....
Total reserves	50,670.87	4,283.53	8,388.38	5,709.08	5,971.66
SURPLUS					
Debentures paid	22,821.05	1,890.85	12,973.12	2,848.99	4,978.87
Local sinking fund	....	....	....	....	....
Operating surplus	62,914.57	11,225.48	3,184.21	7,517.10	7,825.49
Total surplus	85,735.62	13,116.33	16,157.33	10,366.09	12,804.36
Total liabilities, reserves and surplus	246,313.75	28,477.51	27,027.87	20,241.18	35,608.77
Percentage of net debt to total assets	51.4	42.5	11.0	24.9	51.2

"A"—Continued

Hydro Municipalities as at December 31, 1938

Havelock	Kemptville	Kingston	Lakefield	Lanark	Lancaster	Lindsay
1,164	1,204	24,331	1,332	702	588	7,294
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	2,475.18	213,929.81	3,137.97	....	....	10,556.68
572.90	....	225,892.11	....	....	....	3,176.56
19,831.40	20,812.21	179,878.73	22,282.95	6,760.35	6,455.81	91,378.92
....	....	186,321.18	....	....	....	....
2,796.25	6,582.91	66,662.90	5,969.77	1,114.23	1,044.32	25,927.87
5,510.31	7,192.71	112,242.10	7,447.14	1,959.95	1,690.03	32,452.86
1,883.33	1,063.16	77,882.40	1,876.05	709.28	650.65	10,334.23
....	....	....	....	....	....	....
4,620.91	7,126.23	56,796.48	3,840.10	326.94	1,068.55	6,027.94
....	....	17,670.80	....	....	....	....
2,420.45	....	....	3,445.25	....	....	....
37,635.55	45,252.40	1,137,276.51	47,999.23	10,870.75	10,909.36	179,855.06
2,529.93	373.18	29,847.13	2,538.94	3,461.32	4,810.76	7,080.32
10,000.00	20,000.00	111,175.00	8,000.00	1,982.05	....	55,000.00
114.56	1,804.47	24,052.37	1,141.72	132.46	309.79	7,811.14
....	625.42	13,292.21	....	....	....	310.66
....	....	20,937.09	....	....	....	....
10,135.66	17,314.44	20,157.74	10,347.42	5,257.21	5,336.57	74,555.13
....	....	22,739.25	....	....	....	....
60,415.70	85,369.91	1,379,477.30	70,027.31	21,703.79	21,366.48	324,612.31
....	....	....	....	....	....	....
60,415.70	85,369.91	1,379,477.30	70,027.31	21,703.79	21,366.48	324,612.31
5,827.95	15,226.99	54,855.00	20,929.93	658.81	....	80,549.58
11.00	1,174.37	2,229.72	....	39.53	246.60	114.66
....	....	....	....	....	....	....
....	....	5,437.37	634.80	30.00	158.36	2,430.97
5,838.95	16,401.36	62,522.09	21,564.73	728.34	404.96	83,095.21
10,135.66	17,314.44	20,157.74	10,347.42	5,257.21	5,336.57	74,555.13
10,516.06	11,550.75	235,948.62	14,470.70	3,256.25	3,859.00	34,486.06
....	....	144,932.02	....	....	....	....
20,651.72	28,865.19	401,038.38	24,818.12	8,513.46	9,195.57	109,041.19
27,072.05	9,773.01	257,045.00	12,570.07	6,902.66	9,970.42	49,450.42
....	....	20,937.09	....	....	....	....
6,852.98	30,330.35	637,934.74	11,074.39	5,559.33	1,795.53	83,025.49
33,925.03	40,103.36	915,916.83	23,644.46	12,461.99	11,765.95	132,475.91
60,415.70	85,369.91	1,379,477.30	70,027.31	21,703.79	21,366.48	324,612.31
11.1	24.1	3.1	36.1	4.4	2.5	33.2

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Madoc	Marmora	Martintown P.V.	Maxville	Napanee
Population	1,210	1,014		758	3,018
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	100.00		126.15		3,824.74
Substation equipment				407.79	
Distribution system—overhead	11,452.50	13,609.20	2,756.79	11,739.97	43,438.75
Distribution system—underground					
Line Transformers	3,271.56	3,629.11	690.33	1,849.12	10,127.19
Meters	5,167.43	3,976.42	955.81	2,529.30	17,538.07
Street light equipment, regular	1,577.14	1,193.23	335.26	1,908.93	4,129.93
Street light equipment, ornamental					
Miscellaneous construction expense	274.23	2,229.87	727.17	2,368.48	5,276.25
Steam or hydraulic plant					
Old plant		573.62			
Total plant	21,842.86	25,211.45	5,591.51	20,803.59	84,334.93
Bank and cash balance	8,225.97	3,553.58	1,738.67	12.14	
Securities and investments		123.35	1,000.00	2,000.00	
Accounts receivable	638.30	812.39	307.86	984.50	13,993.72
Inventories					6,897.85
Sinking fund on local debentures					
Equity in H-E.P.C. systems	5,998.61	4,460.92	1,763.11	8,180.44	33,041.35
Other assets					
Total assets	36,705.74	34,161.69	10,401.15	31,980.67	138,267.85
Deficit					
Total	36,705.74	34,161.69	10,401.15	31,980.67	138,267.85
LIABILITIES					
Debenture balance		3,365.18		1,269.07	3,150.66
Accounts payable	602.71	70.29			
Bank overdraft					505.82
Other liabilities	321.00	80.00	5.00	80.00	743.42
Total liabilities	923.71	3,515.47	5.00	1,349.07	4,399.90
RESERVES					
For equity in H-E.P.C. systems	5,998.61	4,460.92	1,763.11	8,180.44	33,041.35
For depreciation	1,387.12	4,133.18	1,915.37	5,850.02	8,592.66
Other reserves			81.02	200.00	2,923.87
Total reserves	7,385.73	8,594.10	3,759.50	14,230.46	44,557.88
SURPLUS					
Debentures paid	14,000.00	14,300.93	6,000.00	14,730.93	66,849.34
Local sinking fund					
Operating surplus	14,396.30	7,751.19	636.65	1,670.21	22,460.73
Total surplus	28,396.30	22,052.12	6,636.65	16,401.14	89,310.07
Total liabilities, reserves and surplus	36,705.74	34,161.69	10,401.15	31,980.67	138,267.85
Percentage of net debt to total assets	3.0	11.8	0.0	5.7	4.2

"A"—Continued

Hydro Municipalities as at December 31, 1938

Newcastle	Norwood	Omemee	Oshawa	Ottawa	Perth	Peterborough
690	716	598	24,844	142,852	4,183	23,450
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
....	....	....	60,885.20	484,239.99	5,149.34	78,198.90
....	457.53	360.32	1,468.29	834,864.82	5,779.83	115,957.54
14,042.98	23,334.51	11,788.08	220,261.92	814,287.73	47,446.36	270,381.91
....	....	....	....	186,538.09	....	....
3,971.26	3,879.18	3,611.45	61,539.75	357,709.55	24,521.05	111,423.18
3,490.02	4,822.00	2,631.01	109,057.59	277,407.02	22,668.47	104,525.67
688.22	1,886.92	737.46	16,504.76	123,909.77	4,621.67	58,692.34
....	....	....	....	....	....	....
727.29	4,050.80	1,575.92	34,393.40	39,512.18	6,402.48	87,748.88
....	....	....	....	....	....	....
....	2,447.51	....	8,831.65	....	23,361.94	29,771.74
22,919.77	40,878.45	20,704.24	512,942.56	3,118,469.15	139,951.14	856,700.16
1,647.73	1,879.99	6,200.13	23,286.66	100,283.29	15,791.42	270.00
....	13,000.00	....	....	170,000.00	50,135.49	....
93.48	1,675.00	41.40	55,727.91	87,376.45	5,808.86	32,558.44
....	....	....	12,071.58	27,809.39	8,422.81	6,546.27
....	....	....	....	473,304.07	....	351,899.48
720.60	4,895.29	....	415,387.59	149,442.15	58,508.56	245,063.64
....	368.34	....	56.86	....	....	....
25,381.58	62,697.07	26,945.77	1,019,473.16	4,126,684.50	278,618.28	1,493,037.99
....	....	....	....	....	....	....
25,381.58	62,697.07	26,945.77	1,019,473.16	4,126,684.50	278,618.28	1,493,037.99
11,057.97	21,629.11	245.43	138,416.95	554,749.43	42,219.09	527,920.00
547.84	441.86	....	39,431.05	37,674.49	415.99	49,018.19
....	....	....	....	....	....	12,577.94
....	368.34	129.48	23,578.00	1,530.20	2,646.34	110.00
11,605.81	22,439.31	374.91	201,426.00	593,954.12	45,281.42	589,626.13
720.60	4,895.29	....	415,387.59	149,442.15	58,508.56	245,063.64
8,083.64	12,929.20	8,917.31	74,672.13	1,225,938.05	51,340.20	120,893.38
....	....	....	17,024.60	196,927.30	396.70	1,221.69
8,804.24	17,824.49	8,917.31	507,084.32	1,572,307.50	110,245.46	367,178.71
2,942.03	15,470.89	11,754.57	171,583.05	425,250.57	66,180.91	....
....	....	....	....	473,304.07	....	351,899.48
2,029.50	6,962.38	5,898.98	139,379.79	1,061,868.24	56,910.49	184,333.67
4,971.53	22,433.27	17,653.55	310,962.84	1,960,422.88	123,091.40	536,233.15
25,381.58	62,697.07	26,945.77	1,019,473.16	4,126,684.50	278,618.28	1,493,037.99
47.1	38.4	1.4	33.3	3.4	20.6	26.5

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Picton	Port Hope	Prescott	Richmond	Russell
Population	3,410	4,577	2,850	419	P.V.
ASSETS	$ c.	$ c.	$ c.	$ c.	$ c.
Lands and buildings	10,897.49	9,119.01	2,761.54		
Substation equipment	2,004.66				
Distribution system—overhead	38,958.55	53,273.61	40,094.88	6,686.64	7,872.06
Distribution system—underground					
Line transformers	12,597.28	15,974.45	14,685.16	1,146.53	1,382.48
Meters	17,508.61	23,328.22	19,761.64	1,376.33	1,751.61
Street light equipment, regular	7,202.86	2,977.26	2,116.94	173.98	492.87
Street light equipment, ornamental					
Miscellaneous construction expense	3,811.58	2,107.61	1,268.27	642.54	1,300.04
Steam or hydraulic plant					
Old plant					
Total plant	92,981.03	106,780.16	80,688.43	10,026.02	12,799.06
Bank and cash balance	4,134.36	1,084.14	4,931.04	744.66	1,674.08
Securities and investments	14,000.00	22,000.00	3,000.00		2,500.00
Accounts receivable	4,600.39	4,338.46	5,781.26	533.01	1,375.93
Inventories	7,318.31	2,357.12	440.85		
Sinking fund on local debentures					
Equity in H-E.P.C. systems	42,540.96	42,894.67	41,124.86	2,233.48	4,715.82
Other assets	2,590.31				
Total assets	168,165.36	179,454.55	135,966.44	13,537.17	23,064.89
Deficit					
Total	168,165.36	179,454.55	135,966.44	13,537.17	23,064.89
LIABILITIES					
Debenture balance				4,171.13	4,755.47
Accounts payable	4,024.46	64.25	2,236.15		97.65
Bank overdraft					
Other liabilities	2,590.31	4,490.67	291.75	90.00	
Total liabilities	6,614.77	4,554.92	2,527.90	4,261.13	4,853.12
RESERVES					
For equity in H-E.P.C. systems	42,540.96	42,894.67	41,124.86	2,233.48	4,715.82
For depreciation	14,943.37	14,682.47	42,246.46	1,684.24	2,745.84
Other reserves	1,042.81			52.84	
Total reserves	58,527.14	57,577.14	83,371.32	3,970.56	7,461.66
SURPLUS					
Debentures paid	5,730.32	79,000.00	12,170.99	2,328.87	5,244.53
Local sinking fund					
Operating surplus	97,293.13	38,322.49	37,896.23	2,976.61	5,505.58
Total surplus	103,023.45	117,322.49	50,067.22	5,305.48	10,750.11
Total liabilities, reserves and surplus	168,165.36	179,454.55	135,966.44	13,537.17	23,064.89
Percentage of net debt to total assets	3.3	3.3	2.7	37.7	26.4

"A"—Continued

Hydro Municipalities as at December 31, 1938

Smiths Falls 7,626	Stirling 938	Trenton 6,480	Tweed 1,256	Wark-worth P.V.	Welling-ton 907	Westport 710	Whitby 3,706
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
19,528.85	8,410.00	5,114.41	....	....	200.00	....	6,619.20
4,745.66	7,042.12	28,745.58	....	....	499.80	....	34,493.60
88,621.56	6,717.38	105,572.07	13,068.78	5,620.72	14,804.70	7,319.32	52,818.65
....	....	....	....	....	....	....	....
33,016.85	4,362.05	23,707.86	3,838.76	741.09	3,945.20	1,015.48	12,155.45
35,439.88	5,150.14	30,376.42	5,263.33	1,916.80	5,705.29	1,453.70	18,107.21
9,508.35	3,010.76	13,828.68	1,442.34	338.08	1,326.88	636.84	4,689.77
....	....	....	....	....	....	....	....
15,181.48	482.52	7,328.46	922.19	609.19	826.70	1,314.86	8,668.65
37,286.49	....	....	....	....	....	....	....
21,248.48	....	....	....	3,618.02	2,477.92	1,713.00	1,340.13
264,577.60	35,174.97	214,673.48	24,535.40	12,843.90	29,786.49	13,453.20	138,892.66
1,372.14	8,291.49	4,468.16	....	945.09	722.37	1,696.20	10,167.91
48,000.00	2,689.71	....	....	2,500.00	5,000.00	2,500.00	5,000.00
5,847.53	959.50	3,873.33	2,955.05	160.00	503.55	818.99	8,290.96
965.76	984.58	6,428.37	2,038.26	....	....	....	244.43
....	....	....	....	....	....	....	....
85,454.09	6,958.53	57,270.55	7,184.38	3,126.30	8,214.32	3,522.94	40,993.17
....	....	....	....	....	....	....	....
406,217.12	55,058.78	286,713.89	36,713.09	19,575.29	44,226.73	21,991.33	203,589.13
....	....	....	....	....	....	....	....
406,217.12	55,058.78	286,713.89	36,713.09	19,575.29	44,226.73	21,991.33	203,589.13
7,589.58	....	47,921.48	8,477.92	8,076.00	7,187.46	10,708.83	23,701.25
....	....	....	....	....	....	....	1,293.56
....	....	....	1,438.87	....	....	....	....
174.03	291.13	4,106.56	340.19	4.00	56.25	40.00	1,222.99
7,763.61	291.13	52,028.04	10,256.98	8,080.00	7,243.71	10,748.83	26,217.80
85,454.09	6,958.53	57,270.55	7,184.38	3,126.30	8,214.32	3,522.94	40,993.17
84,053.50	6,192.96	28,175.45	2,535.35	2,339.77	8,914.94	1,365.56	29,910.72
2,339.91	....	....	126.33	....	....	....	....
171,847.50	13,151.49	85,446.00	9,846.06	5,466.07	17,129.26	4,888.50	70,903.89
190,035.42	10,000.00	117,078.52	10,522.08	2,924.00	9,812.54	4,291.17	52,911.25
....	....	....	....	....	....	....	....
36,570.59	31,616.16	32,161.33	6,087.97	3,105.22	10,041.22	2,062.83	53,556.19
226,606.01	41,616.16	149,239.85	16,610.05	6,029.22	19,853.76	6,354.00	106,467.44
406,217.12	55,058.78	286,713.89	36,713.09	19,575.29	44,226.73	21,991.33	203,589.13
2.4	0.6	22.7	34.7	49.1	20.1	58.2	16.1

STATEMENT

Balance Sheets of Electrical Departments of

EASTERN ONTARIO SYSTEM—Concluded **THUNDER BAY**

Municipality Population	Williams-burg P.V.	Winchester 1,041	EASTERN ONTARIO SYSTEM SUMMARY	Fort William 24,020
ASSETS	$ c.	$ c.	$ c.	$ c.
Lands and buildings	....	299.85	1,086,202.39	48,940.29
Substation equipment	....	....	1,371,628.69	142,732.44
Distribution system—overhead	3,431.14	10,010.82	2,826,102.08	168,182.51
Distribution system—underground	....	....	372,859.27	....
Line Transformers	1,978.92	3,371.15	986,292.19	73,454.25
Meters	2,391.10	5,384.01	1,119,786.83	72,812.65
Street light equipment, regular	174.61	719.87	445,822.39	44,901.53
Street light equipment, ornamental	....	....	....	....
Miscellaneous construction expense	460.71	556.98	353,669.16	10,907.95
Steam or hydraulic plant	....	....	101,923.15	....
Old plant	....	1,100.00	125,698.88	293,762.46
Total plant	8,436.48	21,442.68	8,789,985.03	855,694.08
Bank and cash balance	3,106.70	3,172.87	306,707.76	1,242.11
Securities and investments	16,000.00	7,000.00	733,105.60	86,500.00
Accounts receivable	393.18	478.45	383,325.84	49,516.10
Inventories	....	....	127,922.93	10,660.37
Sinking fund on local debentures	....	....	846,140.64	115,239.96
Equity in H-E.P.C. systems	5,312.30	16,916.99	1,956,360.34	538,784.70
Other assets	....	....	37,270.58	....
Total assets	33,248.66	49,010.99	13,180,818.72	1,657,637.32
Deficit	....	....	146.70	....
Total	33,248.66	49,010.99	13,180,965.42	1,657,637.32
LIABILITIES				
Debenture balance	....	3,804.28	1,839,792.13	300,000.00
Accounts payable	....	35.76	182,254.30	33,596.19
Bank overdraft	....	....	19,626.67	8,995.91
Other liabilities	414.87	10.00	80,168.11	23,519.81
Total liabilities	414.87	3,850.04	2,121,841.21	366,111.91
RESERVES				
For equity in H-E.P.C. systems	5,312.30	16,916.99	1,956,360.34	538,784.70
For depreciation	2,932.72	8,516.09	2,338,977.23	131,533.79
Other reserves	258.04	....	387,657.07	21,987.43
Total reserves	8,503.06	25,433.08	4,682,994.64	692,305.92
SURPLUS				
Debentures paid	2,750.00	6,845.72	2,304,147.42	367,650.00
Local sinking fund	....	....	846,140.64	115,239.96
Operating surplus	21,580.73	12,882.15	3,225,841.51	116,329.53
Total surplus	24,330.73	19,727.87	6,376,129.57	599,219.49
Total liabilities, reserves and surplus	33,248.66	49,010.99	13,180,965.42	1,657,637.32
Percentage of net debt to total assets	1.5	12.0	12.3	25.0

"A"—Concluded

Hydro Municipalities as at December 31, 1938

SYSTEM

NORTHERN ONTARIO PROPERTIES—SUDBURY DISTRICT

Nipigon Twp.	Port Arthur 20,302	THUNDER BAY SYSTEM SUMMARY	Capreol 1,730	Sudbury 26,315	SUDBURY DISTRICT SUMMARY	ALL SYSTEMS GRAND SUMMARY
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
215.03	432,812.77	481,968.09	450.00	26,000.00	26,450.00	10,894,019.12
....	323,945.76	466,678.20	9,527.32	63,302.02	72,829.34	23,614,597.80
16,050.74	479,012.81	663,246.06	12,443.43	301,897.08	314,340.51	23,371,092.61
....	....	....	....	....	....	6,134,283.64
3,773.80	79,985.45	157,213.50	3,633.65	76,489.82	80,123.47	10,494,789.40
3,359.80	93,863.95	170,036.40	4,791.49	93,476.64	98,268.13	9,539,413.66
1,497.05	79,562.10	125,960.68	1,004.76	70,763.03	71,767.79	2,697,047.84
....	....	....	....	....	....	1,516,059.81
122.43	32,542.61	43,572.99	869.21	10,931.42	11,800.63	4,444,880.40
....	324,027.37	324,027.37	....	....	....	497,974.74
....	....	293,762.46	....	....	....	4,897,097.67
25,018.85	1,845,752.82	2,726,465.75	32,719.86	642,860.01	675,579.87	98,101,256.69
634.91	25,330.92	27,207.94	379.35	61,350.54	61,729.89	3,043,609.87
732.02	730,044.69	817,276.71	....	56,000.00	56,000.00	4,832,322.57
1,697.08	49,390.82	100,604.00	687.45	16,857.85	17,545.30	4,106,655.16
....	18,034.22	28,694.59	....	9,241.25	9,241.25	1,393,158.18
....	74,272.41	189,512.37	....	....	....	10,397,958.20
4,284.37	1,787,337.70	2,330,406.77	....	....	....	44,254,118.64
....	664.89	664.89	....	....	....	178,534.60
32,367.23	4,530,828.47	6,220,833.02	33,786.66	786,309.65	820,096.31	166,307,613.91
....	....	....	....	....	....	20,050.70
32,367.23	4,530,828.47	6,220,833.02	33,786.66	786,309.65	820,096.31	166,327,664.61
4,287.13	85,080.89	389,368.02	1,918.13	135,800.14	137,718.27	29,987,512.34
....	84,712.48	118,308.67	2,896.65	31,047.95	33,944.60	3,334,802.82
....	....	8,995.91	....	....	....	108,753.61
....	....	23,519.81	185.00	28,737.60	28,922.60	3,120,619.84
4,287.13	169,793.37	540,192.41	4,999.78	195,585.69	200,585.47	36,551,688.61
4,284.37	1,787,337.70	2,330,406.77	....	....	....	44,254,118.64
3,741.90	596,286.17	731,561.86	2,487.00	39,742.00	42,229.00	22,583,476.69
....	82,399.58	104,387.01	118.48	32,629.18	32,747.66	2,814,785.08
8,026.27	2,466,023.45	3,166,355.64	2,605.48	72,371.18	74,976.66	69,652,380.41
5,712.87	557,019.11	930,381.98	17,081.87	331,538.39	348,620.26	30,890,189.93
....	74,272.41	189,512.37	....	....	....	10,397,958.20
14,340.96	1,263,720.13	1,394,390.62	9,099.53	186,814.39	195,913.92	18,835,447.46
20,053.83	1,895,011.65	2,514,284.97	26,181.40	518,352.78	544,534.18	60,123,595.59
32,367.23	4,530,828.47	6,220,833.02	33,786.66	786,309.65	820,096.31	166,327,664.61
15.3	3.6	9.5	14.8	24.9	24.5	22.4

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM

Municipality	Acton	Agincourt	Ailsa Craig	Alvinston	Amherstburg
Population	1,916	P.V.	472	650	2,869
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	10,382.62	4,722.01	2,407.54	3,859.05	20,822.98
Commercial light service	4,373.32	1,243.66	1,396.55	2,571.38	6,828.31
Commercial power service	12,866.07	1,207.60	1,045.96	193.07	5,667.01
Municipal power	639.41	....	....	367.29	....
Street lighting	1,971.81	744.00	668.00	1,854.00	2,350.10
Merchandise	....	....	....	....	....
Miscellaneous	633.70	284.18	306.20	216.75	319.40
Total earnings	30,866.93	8,201.45	5,824.25	9,061.54	35,987.80
EXPENSES					
Power purchased	22,276.23	5,545.73	4,200.47	5,483.44	22,867.56
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	2,614.56	254.30	74.13	107.88	1,267.46
Line transformer maintenance	75.10	54.34	....	16.15	33.24
Meter maintenance	276.77	52.53	0.82	21.62	12.11
Consumers' premises expenses	286.02	137.92	....	....	1,666.55
Street lighting, operation and maintenance	478.26	48.61	22.60	35.40	699.99
Promotion of business	174.79	....	....	....	....
Billing and collecting	638.33	361.85	255.67	392.41	2,001.39
General office, salaries and expenses	461.67	128.88	69.65	90.97	1,477.34
Undistributed expenses	89.97	....	5.53	10.13	133.63
Truck operation and maintenance	238.13	....	....	....	240.40
Interest	....	51.31	....	175.86	898.64
Sinking fund and principal payments on debentures	....	775.15	....	....	1,705.54
Depreciation	1,447.00	414.00	499.00	721.00	2,311.00
Other reserves	....	....	....	....	....
Total operating costs and fixed charges	29,056.83	7,824.62	5,127.87	7,054.86	35,314.85
Net surplus	1,810.10	376.83	696.38	2,006.68	672.95
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	499	151	139	165	642
Commercial light service	91	26	40	53	125
Power service	15	3	2	2	15
Total	605	180	181	220	782

"B"

Hydro Municipalities for Year Ended December 31, 1938

Ancaster Twp.	Arkona 406	Aylmer 1,998	Ayr 755	Baden P.V.	Beachville P.V.	Beamsville 1,121
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
10,355.94	2,703.98	10,941.81	5,252.23	3,632.28	3,004.61	9,669.58
2,681.24	1,624.29	8,780.57	1,659.80	2,039.47	575.87	4,811.90
522.43	147.93	5,739.49	278.60	5,454.92	10,699.82	2,874.35
300.17	....	1,180.51	....	....	....	....
1,054.00	1,072.00	2,525.83	1,028.00	711.00	517.00	1,896.77
....	....	....	....	....	....	....
....	4.28	1,294.05	22.58	26.44	195.33	133.66
14,913.78	5,552.48	30,462.26	8,241.21	11,864.11	14,992.63	19,386.26
8,833.84	3,113.79	18,101.56	5,232.34	8,961.53	12,570.38	10,422.80
....	....	....	....	....	....	....
....	....	....	....	....	....	....
....	....	....	....	....	....	....
1,140.09	202.54	2,210.88	589.99	275.88	198.98	311.40
9.55	....	287.69	14.00	....	....	30.00
267.13	52.31	311.57	50.20	77.55	57.80	159.80
196.05	8.00	47.12	109.22	202.58	242.90	130.97
151.14	96.67	206.20	170.87	107.33	72.91	235.92
....	....	97.53	21.60	....	....	48.00
864.90	179.01	882.23	384.25	275.90	354.44	663.70
620.97	75.61	283.71	47.07	182.69	95.16	732.72
25.07	6.55	166.76	18.26	4.83	....	3.09
....	....	144.53	....	....	....	....
581.93	405.34	832.18	269.24	57.67	72.79	1,500.00
389.55	736.09	1,675.74	446.25	267.59	285.00	1,259.32
1,031.00	379.00	1,651.00	653.00	500.00	725.00	1,000.00
....	....	....	....	....	....	1,099.88
14,111.22	5,254.91	26,898.70	8,006.29	10,913.55	14,675.36	17,597.60
802.56	297.57	3,563.56	234.92	950.56	317.27	1,788.66
....	....	....	....	....	....	....
310	102	685	225	148	152	337
36	35	146	40	39	21	70
7	2	12	4	2	4	8
353	139	843	269	189	177	415

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Belle River	Blenheim	Blyth	Bolton	Bothwell
Population	810	1,775	652	567	643
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	4,392.24	8,525.46	3,490.29	4,174.46	2,617.42
Commercial light service	2,237.47	7,053.47	1,846.55	1,361.37	1,458.60
Commercial power service	74.56	2,866.50	410.35	1,665.29	579.39
Municipal power	1,006.11	1,507.99	....	133.58	143.20
Street lighting	994.50	2,535.00	1,580.00	1,063.52	1,318.65
Merchandise	....	127.54	....	....	5.39
Miscellaneous	40.83	248.86	11.78	92.80	606.63
Total earnings	8,745.71	22,864.82	7,338.97	8,491.02	6,729.28
EXPENSES					
Power purchased	4,858.48	14,534.32	4,382.31	5,107.07	4,574.76
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	483.62	1,185.98	273.00	485.15	310.07
Line transformer maintenance	265.32	132.45	....	....	....
Meter Maintenance	338.94	380.74	33.69	3.75	72.46
Consumers' premises expenses	....	364.14	29.71	280.12	35.43
Street lighting, operation and maintenance	137.08	651.50	108.36	94.76	94.47
Promotion of business	22.21	....	....	....	....
Billing and collecting	508.23	1,062.15	258.60	....	202.65
General office, salaries and expenses	193.10	1,420.50	114.57	586.96	77.29
Undistributed expenses	103.43	128.37	25.97	....	1.72
Truck operation and maintenance	....	....	....	....	....
Interest	....	389.00	247.29	184.77	135.35
Sinking fund and principal payments on debentures	....	638.12	1,035.44	439.50	227.90
Depreciation	840.00	1,738.00	537.00	657.00	610.00
Other reserves	....	....	....	....	....
Total operating costs and fixed charges	7,750.41	22,625.27	7,045.94	7,839.08	6,342.10
Net surplus	995.30	239.55	293.03	651.94	387.18
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	238	536	172	172	182
Commercial light service	50	131	51	31	54
Power service	2	11	3	10	7
Total	290	678	226	213	243

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Brampton	Brantford	Brantford Twp.	Bridgeport	Brigden	Brussels	Burford
5,638	31,282		P.V.	P.V.	780	P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
39,357.55	166,887.81	21,179.00	4,639.47	2,349.89	4,573.10	4,187.77
18,648.23	74,787.61	4,383.56	1,009.02	2,095.77	2,723.30	1,095.51
17,556.33	196,802.57	3,063.71	235.21	561.41	737.02	1,490.51
1,503.36	21,025.07	....	....	....	....	....
5,667.08	33,466.45	4,103.00	723.00	800.00	1,296.00	670.08
....	....	....	....	....	....	....
884.91	5,709.56	884.24	....	155.90	202.01	280.71
83,617.46	498,679.07	33,613.51	6,606.70	5,962.97	9,531.43	7,724.58
68,929.42	347,380.82	18,245.81	3,536.22	3,816.31	5,431.57	5,065.12
....	7,797.51	....	....	....	....	....
72.89	2,724.50	....	....	....	....	....
1,634.86	12,783.22	1,438.66	117.84	269.07	371.81	67.02
861.02	1,012.24	45.21	11.70	....	....	....
413.10	5,010.48	139.60	36.70	7.25	42.61	45.01
607.74	5,673.06	407.81	59.53	....	15.00	98.40
696.73	4,471.59	968.15	112.65	112.92	97.47	77.06
....	79.42	....	53.73	....	....	....
2,079.48	11,742.45	1,777.27	330.26	281.96	....	451.19
1,645.65	9,940.43	1,438.78	33.17	320.73	657.74	121.08
165.49	3,906.23	10.67	5.00	9.66	....	6.70
179.76	1,867.02	....	....	....	....	....
311.65	5,237.60	422.00	459.18	....	482.87	....
2,271.50	15,750.00	2,056.98	738.93	....	1,274.47	....
5,384.00	31,586.00	2,952.00	574.00	424.00	697.00	550.00
....	13,000.00	....	....	25.03	....	....
85,253.29	479,962.57	29,902.94	6,068.91	5,266.93	9,070.54	6,481.58
....	18,716.50	3,710.57	537.79	696.04	460.89	1,243.00
1,635.83	....	....	....	....	....	....
1,446	7,698	959	154	123	236	195
248	1,142	53	23	41	64	32
54	201	7	3	5	2	2
1,748	9,041	1,019	180	169	302	229

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Burgess-ville	Caledonia	Campbell-ville	Cayuga	Chatham
Population	P.V.	1,410	P.V.	664	16,153
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	1,446.53	6,134.95	1,517.52	3,799.55	87,034.29
Commercial light service	639.19	4,817.21	587.51	3,912.00	77,608.46
Commercial power service	319.57	1,716.23	....	1,020.75	67,498.18
Municipal power	....	....	....	....	6,196.33
Street lighting	312.00	1,796.75	480.00	1,474.50	19,240.76
Merchandise	....	....	....	....	1,001.22
Miscellaneous	....	87.66	60.22	98.96	3,194.54
Total earnings	2,717.29	14,552.80	2,645.25	10,305.76	261,773.78
EXPENSES					
Power purchased	1,849.49	8,295.67	1,547.56	4,686.26	137,220.49
Substation operation	....	....	....	....	8,072.21
Substation maintenance	....	....	....	....	2,536.07
Distribution system, operation and maintenance	123.96	1,148.89	64.50	497.08	7,006.47
Line transformer maintenance	3.00	217.84	....	1.53	1,331.40
Meter maintenance	116.57	167.41	....	10.00	6,186.82
Consumers' premises expenses	....	....	....	....	6,044.17
Street lighting, operation and maintenance	17.28	353.16	12.00	184.23	5,363.40
Promotion of business	....	105.06	....	17.21	3,847.75
Billing and collecting	....	791.95	....	540.72	10,015.20
General office, salaries and expenses	128.93	138.14	92.83	478.50	13,777.16
Undistributed expenses	....	85.79	....	70.05	3,587.84
Truck operation and maintenance	....	151.95	....	....	3,036.28
Interest	6.09	40.01	143.96	523.11	9,875.83
Sinking fund and principal payments on debentures	....	321.71	344.28	1,150.48	19,071.86
Depreciation	338.00	782.00	139.00	663.00	19,113.00
Other reserves	....	....	....	50.00	....
Total operating costs and fixed charges	2,583.32	12,599.58	2,344.13	8,872.17	256,085.95
Net surplus	133.97	1,953.22	301.12	1,433.59	5,687.83
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	54	388	48	157	4,059
Commercial light service	16	90	11	62	769
Power service	2	6	....	8	105
Total	72	484	59	227	4,933

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Chippawa 1,186	Clifford 446	Clinton 1,901	Comber P.V.	Cottam P.V.	Courtright 334	Dashwood P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
7,419.63	2,501.18	12,050.06	2,073.10	2,410.98	1,830.83	1,531.16
1,960.26	1,976.29	7,493.62	1,950.82	1,387.40	1,073.78	1,074.37
40.34	464.11	3,456.73	2,226.67	277.87	....	708.03
1,100.40	....	996.14	....	....	806.77	....
1,702.42	901.31	2,674.96	672.00	480.00	774.00	451.00
....	....	271.81	....	....	....	....
138.78	25.90	777.57	186.60	138.07	2.70	94.65
12,361.83	5,868.79	27,720.89	7,109.19	4,694.32	4,488.08	3,859.21
5,987.62	3,653.12	16,856.23	4,941.57	2,528.04	2,448.10	2,655.39
....	....	....	....	....	....	....
....	....	100.00	....	....	....	....
1,374.77	92.09	1,141.67	330.56	306.18	99.58	134.10
17.01	....	26.59	....	98.00	....	....
241.90	39.82	274.45	69.09	159.18	....	141.72
354.34	28.00	332.52	....	....	....	....
444.93	43.78	367.27	68.15	66.30	55.53	37.16
48.40	....	....	....	....	....	....
535.71	304.94	797.79	205.49	....	171.51	139.68
603.87	68.54	1,131.93	471.20	443.97	5.72	42.36
96.47	12.33	70.40	19.14	....	6.31	1.08
....	....	53.48	....	....	....	....
187.05	328.91	2,062.50	37.06	287.98	756.55	90.68
1,024.91	221.53	972.49	193.98	465.15	85.74	144.50
860.00	343.00	2,322.00	531.00	434.00	249.00	263.00
....	....	....	....	....	....	....
11,776.98	5,136.06	26,509.32	6,867.24	4,788.80	3,878.04	3,649.67
584.85	732.73	1,211.57	241.95	....	610.04	209.54
....	....	....	....	94.48	....	....
336	121	549	102	111	74	79
49	40	151	45	30	24	28
2	1	16	3	1	1	2
387	162	716	150	142	99	109

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Delaware	Delhi*	Dorchester	Drayton	Dresden
Population	P.V.	1,677	P.V.	551	1,477
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	1,695.43	4,320.51	2,412.24	3,332.44	6,465.69
Commercial light service	687.75	5,237.87	909.31	1,963.02	5,576.09
Commercial power service		2,377.29	565.38	1,192.12	2,907.37
Municipal power					406.50
Street lighting	264.00	1,228.75	714.84	960.00	1,979.86
Merchandise					
Miscellaneous	127.64	152.52	113.48	222.81	1,485.33
Total earnings	2,774.82	13,316.94	4,715.25	7,670.39	18,820.84
EXPENSES					
Power purchased	1,815.94	6,833.36	3,199.37	5,148.81	11,856.34
Substation operation					
Substation maintenance					
Distribution system, operation and maintenance	15.40	1,099.26	39.19	177.78	2,023.80
Line transformer maintenance		23.37		92.25	
Meter maintenance		112.11	13.90	22.75	394.91
Consumers' premises expenses		20.24	30.33	63.41	
Street lighting, operation and maintenance	2.70	131.17	26.41	109.94	278.99
Promotion of business			40.00		
Billing and collecting	147.50	459.89	188.85		880.95
General office, salaries and expenses	34.94	273.91	27.28	365.28	917.46
Undistributed expenses		240.01			125.93
Truck operation and maintenance		197.73			239.43
Interest	75.25	335.54	90.03	304.77	
Sinking fund and principal payments on debentures	184.96		189.69	385.39	
Depreciation	194.00		422.00	625.00	937.00
Other reserves					
Total operating costs and fixed charges	2,470.69	9,726.59	4,267.05	7,295.38	17,654.81
Net surplus	304.13	3,590.35	448.20	375.01	1,166.03
Net loss					
NUMBER OF CONSUMERS					
Domestic service	56	464	146	163	415
Commercial light service	17	131	28	63	119
Power service		4	2	5	10
Total	73	599	176	231	544

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*7 months' operation

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Drumbo P.V.	Dublin P.V.	Dundas 4,956	Dunnville 4,004	Dutton 807	East York Twp.	Elmira 2,069
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,175.81	1,486.11	21,466.72	13,531.56	3,079.23	182,025.90	15,075.11
851.83	784.17	11,821.21	14,068.54	2,383.11	28,592.90	7,208.93
593.96	1,187.27	22,379.82	9,790.14	2,871.67	31,321.12	5,245.96
....	....	359.76	2,703.94	....	5,391.30	853.36
513.50	650.00	5,557.00	3,712.89	1,024.44	19,924.57	1,843.00
....	....	....	....	8.65	....	....
78.76	1.52	596.09	1,360.64	229.08	474.50	854.45
4,213.86	4,109.07	62,180.60	45,167.71	9,596.18	267,730.29	31,080.81
2,626.65	2,441.46	40,209.31	24,875.32	6,919.48	169,133.03	19,410.68
....	....	392.53	....	....	....	....
....	....	....	406.39	....	....	....
203.03	105.89	3,610.59	2,709.15	370.57	8,115.93	1,333.96
....	....	121.24	224.73	2.45	886.14	66.67
0.78	6.95	885.10	430.66	105.07	4,660.01	188.20
....	....	132.93	....	76.66	4,136.84	646.39
94.09	87.28	589.71	336.85	196.40	2,432.17	147.10
....	....	....	21.61	27.40	....	200.44
223.50	113.02	1,296.56	1,080.53	351.30	14,410.23	726.97
92.34	85.59	2,023.73	1,317.22	145.50	12,626.52	617.99
1.04	5.95	457.35	151.77	13.98	1,579.32	316.48
....	....	857.07	282.62	....	....	333.14
84.69	....	874.91	2,260.33	....	11,374.88	948.49
208.04	....	2,696.70	3,300.60	....	18,141.55	2,064.69
336.00	334.00	4,790.00	3,745.00	656.00	14,983.00	2,344.00
....	....	....	....	....	....	....
3,870.16	3,180.14	58,937.73	41,142.78	8,864.81	262,479.62	29,345.20
343.70	928.93	3,242.87	4,024.93	731.37	5,250.67	1,735.61
....	....	....	....	....	....	....
90	54	1,256	904	220	9,503	518
28	22	189	220	67	414	122
1	2	36	25	9	42	21
119	78	1,481	1,149	296	9,959	661

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Elora	Embro	Erieau	Erie Beach	Essex
Population	1,149	428	273	21	1,833
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	7,161.53	2,851.78	3,676.99	1,827.80	8,084.98
Commercial light service	3,988.13	1,461.06	1,249.23	411.22	6,546.59
Commercial power service	2,737.11	1,063.83	401.00	....	5,794.38
Municipal power	....	....	....	....	1,818.70
Street lighting	1,651.60	669.00	432.00	....	2,115.35
Merchandise	....	....	9.00	....	....
Miscellaneous	413.96	113.59	31.06	6.48	557.14
Total earnings	15,952.33	6,159.26	5,799.28	2,245.50	24,917.14
EXPENSES					
Power purchased	9,809.43	4,101.83	3,496.75	1,149.69	13,816.29
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	1,010.46	210.80	152.68	79.15	309.70
Line transformer maintenance	33.60	....	65.47	15.13	5.30
Meter Maintenance	150.80	43.84	143.35	23.89	117.39
Consumers' premises expenses	68.86	88.30	202.47	6.24	87.80
Street lighting, operation and maintenance	230.55	114.98	49.44	....	288.79
Promotion of business	150.77	40.00	....	....	269.69
Billing and collecting	719.65	271.59	534.88	212.35	1,050.16
General office, salaries and expenses	987.99	114.23	239.55	36.61	1,529.69
Undistributed expenses	172.30	....	1.54	0.53	182.35
Truck operation and maintenance	265.71	....	....	....	243.79
Interest	41.69	72.79	195.95	117.43	925.63
Sinking fund and principal payments on debentures	675.73	581.96	434.88	170.27	623.03
Depreciation	1,254.00	564.00	463.00	103.00	2,097.00
Other reserves	....	....	....	....	102.23
Total operating costs and fixed charges	15,571.54	6,204.32	5,979.96	1,914.29	21,648.84
Net surplus	380.79	....	....	331.21	3,268.30
Net loss	....	45.06	180.68	....	....
NUMBER OF CONSUMERS					
Domestic service	327	117	193	82	469
Commercial light service	76	42	12	3	119
Power service	2	1	2	....	19
Total	405	160	207	85	607

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Etobicoke Twp.	Exeter	Fergus	Fonthill	Forest	Forest Hill	Galt
	1,652	2,785	829	1,502	10,208	14,410
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
135,407.05	10,841.50	16,323.75	5,133.57	11,450.46	186,013.59	88,226.40
22,008.18	5,780.80	6,612.53	1,585.21	6,068.86	21,570.01	42,124.78
20,558.22	3,024.34	12,706.00	253.16	3,848.45	2,239.14	101,440.63
4,415.27	462.49	593.71	221.82	871.08	536.47	4,586.49
14,318.74	2,734.50	2,578.62	1,163.00	2,385.50	6,218.45	16,283.92
....	11.16	7.28	....	280.40	....	....
....	902.43	70.55	....	820.88	2,721.61	2,403.06
196,707.46	23,757.22	38,892.44	8,356.76	25,725.63	219,299.27	255,065.28
125,438.45	14,952.58	31,914.28	3,524.37	15,798.08	161,092.66	168,545.59
....	....	....	....	....	331.39	3,723.48
....	....	....	....	....	....	367.48
7,105.50	915.39	925.98	506.51	1,824.76	3,743.51	3,352.31
1,176.10	....	346.24	....	6.30	120.26	213.70
1,050.20	599.05	703.70	170.54	101.35	430.33	1,836.46
6,939.85	572.74	521.07	10.39	858.96	2,428.93	1,451.93
1,283.10	277.33	802.93	68.24	299.09	605.13	1,945.09
....	....	....	....	88.28	....	1,939.72
5,914.03	816.92	813.93	465.42	952.55	4,193.59	4,262.15
4,770.26	1,656.14	765.44	121.25	1,439.85	4,815.19	4,749.82
2,092.31	27.31	181.37	....	121.20	645.62	2,121.25
1,353.85	285.04	375.25	....	428.18	860.41	508.25
7,202.17	193.22	720.64	637.07	384.38	12,106.19	6,312.99
12,445.25	1,225.83	1,347.93	1,327.32	998.02	11,291.90	21,838.47
13,411.00	1,734.00	1,867.00	549.00	1,636.00	8,356.00	26,018.25
....	....	....	....	....	....	....
190,182.07	23,255.55	41,285.76	7,380.11	24,937.00	211,021.11	249,186.94
6,525.39	501.67	....	976.65	788.63	8,278.16	5,878.34
....	....	2,393.32	....	....	....	....
4,081	459	660	227	461	2,832	3,809
217	119	111	33	120	215	501
32	11	14	4	22	20	119
4,330	589	785	264	603	3,067	4,429

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	George-town 2,325	Glencoe 810	Goderich 4,488	Granton P.V.	Guelph 21,333
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	17,179.50	5,013.69	29,939.91	1,734.57	106,395.69
Commercial light service	7,018.92	3,606.77	16,731.86	1,060.95	54,636.47
Commercial power service	22,812.69	1,708.40	10,808.35	....	103,107.62
Municipal power	628.45	1,698.55	2,715.14	....	18,158.57
Street lighting	2,669.02	1,962.00	4,521.50	370.00	18,786.56
Merchandise	....	114.40	118.95	....	....
Miscellaneous	687.81	347.22	421.36	191.51	966.59
Total earnings	50,996.39	14,451.03	65,257.07	3,357.03	302,051.50
EXPENSES					
Power purchased	39,289.37	8,709.69	41,489.51	2,638.35	218,693.34
Substation operation	....	....	1,915.06	....	3,900.73
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	2,159.85	826.55	2,858.48	103.41	5,310.61
Line transformer maintenance	118.32	....	246.25	42.25	2,000.56
Meter maintenance	391.83	21.05	644.89	1.50	3,826.60
Consumers' premises expenses	456.46	31.40	376.57	2.50	1,544.22
Street lighting, operation and maintenance	310.76	151.23	876.02	58.01	5,445.48
Promotion of business	....	....	....	51.80	1,362.20
Billing and collecting	1,619.31	322.84	1,542.06	350.43	6,555.01
General office, salaries and expenses	915.31	348.30	1,672.71	69.98	10,663.92
Undistributed expenses	106.02	187.88	140.84	6.00	1,105.06
Truck operation and maintenance	460.99	....	185.90	....	2,122.19
Interest	428.69	226.32	2,071.33	99.23	250.00
Sinking fund and principal payments on debentures	1,024.29	1,282.72	2,861.17	159.49	105.10
Depreciation	2,344.00	1,170.00	6,384.00	280.00	19,402.00
Other reserves	....	51.62	....	....	....
Total operating costs and fixed charges	49,625.20	13,329.60	63,264.79	3,862.95	282,287.02
Net surplus	1,371.19	1,121.43	1,992.28	....	19,764.48
Net loss	....	....	....	505.92	....
NUMBER OF CONSUMERS					
Domestic service	741	218	1,232	85	5,289
Commercial light service	130	78	241	33	789
Power service	28	6	20	....	132
Total	899	302	1,493	118	6,210

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Hagersville	Hamilton	Harriston	Harrow	Hensall	Hespeler	Highgate
1,307	153,527	1,266	984	680	2,810	349
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
5,481.85	825,482.68	7,077.78	8,785.03	3,865.84	14,239.95	1,623.02
5,841.13	427,981.93	4,825.10	4,689.12	2,466.46	5,403.26	864.07
9,970.67	1,586,697.73	5,179.71	2,824.56	2,975.54	34,761.48	1,011.26
....	68,127.27	423.89	....	35.74	823.74	30.06
2,050.00	123,718.67	1,606.50	1,332.00	1,008.00	3,112.33	567.00
....	....	....	183.16	....	....	....
885.72	63,540.12	170.77	29.77	356.05	1,174.06	144.14
24,229.37	3,095,548.40	19,283.75	17,843.64	10,707.63	59,514.82	4,239.55
14,168.50	2,119,084.58	11,853.44	12,362.22	6,578.44	42,788.85	2,938.46
....	53,285.19	....	....	....	429.76	....
....	8,315.20	....	....	....	65.26	....
2,469.07	32,781.82	1,518.56	201.70	975.06	3,272.85	147.45
101.27	7,050.82	29.34	....	....	....	....
366.84	30,580.03	170.92	219.84	200.60	253.59	21.55
....	33,017.80	134.45	254.70	10.00	113.50	....
444.05	16,348.91	306.66	208.70	123.07	464.87	59.15
....	22,832.76	87.90	23.00	....	....	....
774.18	64,314.25	710.72	727.57	285.50	1,043.22	300.59
588.96	51,960.66	340.12	529.60	300.48	1,344.81	152.08
42.95	22,028.93	41.61	40.62	15.26	560.65	6.37
226.24	....	84.38	....	....	221.45	....
99.06	142,414.34	366.47	193.54	282.18	1,403.53	....
291.25	279,338.82	655.29	695.78	580.25	2,328.73	....
1,293.00	143,748.03	1,179.00	953.00	773.00	3,025.00	406.00
....	....	....	....	....	....	....
20,865.37	3,027,102.14	17,478.86	16,410.27	10,123.84	57,316.07	4,031.65
3,364.00	68,446.26	1,804.89	1,433.37	583.79	2,198.75	207.90
....	....	....	....	....	....	....
356	38,779	350	280	190	735	99
112	5,152	100	77	59	100	35
14	1,250	13	5	14	28	6
482	45,181	463	362	263	863	140

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Humberstone	Ingersoll	Jarvis	Kingsville	Kitchener
Population	2,629	5,177	505	2,363	32,550
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	10,264.65	30,599.78	2,655.00	13,951.86	192,841.68
Commercial light service	2,801.60	16,250.13	1,839.20	7,110.03	115,372.85
Commercial power service	4,188.25	25,788.44	3,338.91	3,463.83	263,259.52
Municipal power	....	1,356.60	....	1,134.51	17,866.46
Street lighting	1,617.50	4,727.36	858.00	2,852.99	33,584.06
Merchandise	....	....	....	....	....
Miscellaneous	441.37	580.85	198.19	1,359.29	1,801.85
Total earnings	19,313.37	79,303.16	8,889.30	29,872.51	624,726.42
EXPENSES					
Power purchased	10,156.76	56,003.19	5,743.96	16,370.50	457,193.34
Substation operation	....	413.62	....	....	6,208.89
Substation maintenance	....	....	....	....	4,194.09
Distribution system, operation and maintenance	1,332.28	3,846.21	67.01	1,556.83	15,013.08
Line transformer maintenance	21.00	61.59	....	57.17	734.81
Meter maintenance	232.59	819.16	44.10	373.22	5,831.50
Consumers' premises expenses	....	760.39	....	151.76	11,532.15
Street lighting, operation and maintenance	171.84	1,056.50	71.98	675.41	7,513.66
Promotion of business	....	239.24	....	184.67	5,373.97
Billing and collecting	737.38	1,495.09	526.64	1,862.39	15,032.66
General office, salaries and expenses	267.08	3,919.74	54.93	1,146.14	10,466.03
Undistributed expenses	15.22	380.34	5.19	339.25	6,565.56
Truck operation and maintenance	161.56	317.15	....	155.98	3,588.73
Interest	804.00	1,200.00	246.07	1,581.71	7,359.77
Sinking fund and principal payments on debentures	1,700.00	....	637.22	903.80	18,976.49
Depreciation	1,106.00	4,297.00	485.00	2,246.00	38,475.00
Other reserves	....	....	....	128.30	....
Total operating costs and fixed charges	16,705.71	74,809.22	7,882.10	27,733.13	614,059.73
Net surplus	2,607.66	4,493.94	1,007.20	2,139.38	10,666.69
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	634	1,404	143	618	7,591
Commercial light service	62	232	44	150	1,051
Power service	6	47	4	16	240
Total	702	1,683	191	784	8,882

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Lambeth P.V.	La Salle 812	Leamington 5,446	Listowel 2,826	London 74,281	London Twp.	Long Branch 4,029
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,163.03	6,221.29	26,717.34	16,292.40	513,867.77	11,851.31	26,391.23
1,181.33	1,598.56	17,610.38	10,484.46	196,729.35	2,318.22	6,006.00
....	2,223.00	20,934.96	11,935.26	344,666.11	1,590.69	1,530.50
523.63	....	2,669.75	1,076.49	70,705.40	....	1,022.31
734.22	630.08	5,440.42	4,513.71	55,505.78	1,125.85	4,415.09
....	2.22	2.54	....	4,782.98	....	....
75.27	86.83	1,513.65	634.30	25,470.81	292.91	....
5,677.48	10,761.98	74,889.04	44,936.62	1,211,728.20	17,178.98	39,365.13
3,839.98	6,912.66	47,754.87	30,352.79	770,945.99	12,780.09	21,159.98
....	....	....	....	17,147.80	....	....
....	....	....	69.22	17,274.11	....	....
181.34	624.02	2,455.55	1,843.43	21,068.74	483.14	2,571.78
3.08	9.00	....	9.95	3,778.90	25.84	239.74
157.27	95.99	586.67	223.00	18,142.27	193.68	351.79
31.86	80.67	560.18	262.83	18,981.24	848.06	264.34
56.45	172.71	798.13	424.29	7,825.99	164.71	472.64
....	....	664.10	....	31,047.15	....	....
237.00	371.51	1,911.23	889.93	28,181.18	807.08	2,129.05
59.78	431.08	3,024.09	1,795.71	41,258.93	509.67	2,413.82
1.49	60.09	688.23	126.64	17,818.83	4.42	724.70
....	....	530.62	188.41	5,542.58	....	....
....	504.46	1,407.74	125.85	30,201.20	302.60	685.81
....	847.86	2,783.17	658.81	71,095.22	661.84	1,954.71
426.00	1,022.00	4,015.00	3,208.00	110,688.45	934.00	2,613.00
....	50.21	....	....	4,415.33	50.00	....
4,994.25	11,182.26	67,179.58	40,178.86	1,215,413.91	17,765.13	35,581.36
683.23	....	7,709.46	4,757.76	....	....	3,783.77
....	420.28	....	....	3,685.71	586.15	....
122	203	1,436	746	17,845	401	1,256
25	18	259	154	2,103	22	96
2	3	31	23	443	4	7
149	224	1,726	923	20,391	427	1,359

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Lucan	Lynden	Markham	Merlin	Merritton
Population	614	P.V.	1,116	P.V.	2,644
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	4,191.68	2,130.11	6,901.77	2,335.20	12,735.36
Commercial light service	1,822.44	737.54	3,408.16	2,056.80	2,759.69
Commercial power service	2,301.55	702.82	2,456.62	316.56	108,473.72
Municipal power			364.57		175.52
Street lighting	979.98	440.00	1,428.00	691.01	3,336.00
Merchandise					
Miscellaneous	347.67	28.18	401.28	468.79	263.31
Total earnings	9,643.32	4,038.65	14,960.40	5,868.36	127,743.60
EXPENSES					
Power purchased	5,947.84	2,615.88	9,717.68	2,709.86	114,364.49
Substation operation					317.15
Substation maintenance					
Distribution system, operation and maintenance	699.20	31.57	881.76	217.38	2,138.22
Line transformer maintenance	1.23		80.05		33.53
Meter Maintenance	8.70		60.15	235.96	837.95
Consumers' premises expenses	85.19		94.01	59.55	57.66
Street lighting, operation and maintenance	148.38		153.92	143.96	645.51
Promotion of business	119.13		18.00		
Billing and collecting	644.03		749.95	235.77	1,391.87
General office, salaries and expenses	329.80	188.37	271.73	206.02	1,937.63
Undistributed expenses	82.85	29.25		1.35	180.14
Truck operation and maintenance			161.84		235.45
Interest	157.66	107.75		278.04	1,289.99
Sinking fund and principal payments on debentures	330.23	201.53		898.96	1,965.24
Depreciation	779.00	320.00	929.00	442.00	3,335.00
Other reserves			50.00		
Total operating costs and fixed charges	9,333.24	3,494.35	13,168.09	5,428.85	128,729.83
Net surplus	310.08	544.30	1,792.31	439.51	
Net loss					986.23
NUMBER OF CONSUMERS					
Domestic service	178	90	297	114	690
Commercial light service	52	14	70	47	68
Power service	7	2	8	1	13
Total	237	106	375	162	771

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Milton 1,791	Milverton 1,006	Mimico 6,940	Mitchell 1,607	Moorefield P.V.	Mount Brydges P.V.	Newbury 279
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
12,251.22	4,796.04	53,267.68	11,595.57	1,093.25	2,773.56	1,323.57
5,568.13	3,456.91	10,512.14	5,608.65	942.00	962.24	680.94
16,400.85	2,849.51	4,173.83	3,646.91	16.20	831.76	269.44
....	322.07	7,093.76	691.87	....	....	....
1,937.52	1,033.50	7,604.21	2,547.00	350.00	672.23	705.00
565.38	....	....	421.38	....	....	....
756.87	120.14	78.62	60.89	13.31	231.71	32.20
37,479.97	12,578.17	82,730.24	24,572.27	2,414.76	5,471.50	3,011.15
25,988.03	8,891.47	51,613.18	14,865.81	1,661.91	3,333.66	1,493.99
....	....	....	....	....	....	....
254.35	....	23.75	23.69	....	....	....
1,976.63	521.61	7,135.32	568.66	71.06	123.66	165.91
772.42	....	195.43	161.29	....	6.10	....
510.92	21.49	918.02	444.64	28.60	32.85	4.15
784.19	120.48	1,473.72	621.75	....	21.95	....
460.75	80.96	1,575.50	326.00	32.40	13.78	81.56
....	....	....	....	....	....	....
1,018.72	641.40	2,030.07	954.46	....	245.30	....
1,330.91	391.85	2,181.42	1,077.21	124.66	91.47	136.70
85.67	18.41	227.01	460.97	....	11.14	5.92
701.38	....	544.57	274.38	....	....	....
324.30	....	3,419.66	....	0.50	90.82	138.06
914.73	....	6,569.02	....	....	199.60	500.00
2,263.00	801.00	6,253.00	3,654.00	226.00	405.00	354.00
....	....	375.00	....	....	....	....
37,386.00	11,488.67	84,534.67	23,432.86	2,145.13	4,575.33	2,880.29
93.97	1,089.50	....	1,139.41	269.63	896.17	130.86
....	....	1,804.43	....	....	....	....
499	241	1,843	476	56	150	68
109	77	144	124	28	45	22
15	8	19	22	1	3	1
623	326	2,006	622	85	198	91

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	New Hamburg	New Toronto	Niagara Falls	Niagara-on the-Lake	North York Twp.
Population	1,441	7,095	18,747	1,651	
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	9,466.21	36,224.01	129,362.85	13,913.50	140,344.20
Commercial light service	4,542.10	16,284.24	59,700.86	4,364.21	22,015.66
Commercial power service	4,977.09	120,670.83	64,560.55	591.48	30,916.98
Municipal power	....	11,208.62	16,721.90	1,538.09	7,078.90
Street lighting	2,217.00	7,446.51	27,492.57	3,231.42	3,974.06
Merchandise	57.46	....	....	749.67	....
Miscellaneous	282.88	596.41	2,078.70	322.22	1,410.41
Total earnings	21,542.74	192,430.62	299,917.43	24,710.59	205,740.21
EXPENSES					
Power purchased	13,577.48	163,420.11	169,988.28	11,747.50	105,095.91
Substation operation	....	....	11,478.91	....	....
Substation maintenance	233.72	....	....	....	....
Distribution system, operation and maintenance	928.60	5,257.15	6,320.13	1,849.60	10,907.17
Line transformer maintenance	6.78	221.85	521.84	30.92	324.28
Meter maintenance	293.20	2,268.03	6,663.83	85.04	1,913.74
Consumers' premises expenses	140.61	16.62	279.53	1.80	2,873.02
Street lighting, operation and maintenance	307.72	1,142.55	4,026.98	729.57	776.73
Promotion of business	....	....	....	300.05	....
Billing and collecting	747.24	3,067.25	8,222.68	1,475.88	5,400.55
General office, salaries and expenses	1,164.01	7,091.54	10,843.56	1,683.65	6,019.91
Undistributed expenses	229.38	441.08	3,500.87	91.55	1,753.01
Truck operation and maintenance	325.18	705.31	1,359.07	361.66	3,031.27
Interest	186.16	158.43	13,017.88	928.42	18,116.20
Sinking fund and principal payments on debentures	1,011.49	388.34	32,178.35	1,249.06	20,697.65
Depreciation	1,495.00	6,384.00	27,283.00	2,009.00	15,145.00
Other reserves	....	750.00	....	....	....
Total operating costs and fixed charges	20,646.57	191,312.26	295,684.91	22,543.70	192,054.44
Net surplus	896.17	1,118.36	4,232.52	2,166.89	13,685.77
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	359	1,705	4,580	522	3,968
Commercial light service	104	210	712	83	299
Power service	12	31	86	8	34
Total	475	1,946	5,378	613	4,301

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Norwich	Oil Springs	Otterville	Palmerston	Paris	Parkhill	Petrolia
1,212	470	P.V.	1,410	4,325	997	2,711
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
8,126.20	1,454.44	2,240.79	9,503.43	23,318.19	5,117.47	11,695.44
4,163.50	1,356.11	1,978.69	5,315.67	8,209.49	3,527.94	7,479.94
1,452.79	6,485.20	415.82	5,074.04	13,003.44	222.01	23,546.57
560.36	....	....	1,797.66	1,083.80	533.34	....
2,105.00	768.00	844.18	2,628.00	5,586.50	1,577.04	2,822.00
834.52	....	....	....	....	....	....
191.70	404.31	54.30	30.07	3,133.82	107.21	529.05
17,434.07	10,468.06	5,533.78	24,348.87	54,335.24	11,085.01	46,073.00
10,340.93	7,284.21	3,532.43	14,093.80	31,037.90	7,255.00	28,463.28
....	....	....	580.21	858.30	....	....
....	....	....	357.49	....	....	....
1,788.64	487.08	179.65	436.21	4,111.18	284.68	5,198.11
....	57.48	57.34	119.50	224.03	....	57.58
121.61	68.92	119.75	388.56	672.72	273.86	801.43
370.79	....	39.11	376.84	966.69	167.89	121.05
190.96	162.82	77.49	445.25	1,634.89	153.10	220.38
73.86	34.28	....	18.36	337.66	31.70	483.51
430.28	309.63	290.90	416.12	1,523.93	344.55	2,024.83
588.43	178.83	85.05	729.43	1,257.24	94.38	1,090.73
124.90	26.89	6.45	53.06	318.28	12.55	235.88
85.14	....	....	160.23	476.06	....	347.87
175.40	....	....	272.80	344.88	121.37	839.02
721.52	....	....	331.21	910.32	987.00	1,569.17
1,000.00	830.00	522.00	1,390.00	5,837.00	829.00	3,416.00
....	....	....	....	....	....	.....213.60
16,012.46	9,440.14	4,910.17	20,169.07	50,511.08	10,555.08	45,082.44
1,421.61	1,027.92	623.61	4,179.80	3,824.16	529.93	990.56
....	....	....	....	....	....	....
376	88	123	389	1,163	256	750
89	33	40	99	190	76	178
7	36	4	12	23	3	68
472	157	167	500	1,376	335	996

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	Platts-ville P.V.	Point Edward 1,161	Port Colborne 6,348	Port Credit 1,751	Port Dalhousie 1,565
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	2,396.05	5,607.06	29,568.31	13,578.76	15,779.96
Commercial light service	924.71	2,255.16	15,772.96	6,234.66	3,367.33
Commercial power service	1,079.40	29,810.73	13,632.55	2,871.07	4,856.12
Municipal power	....	....	6,293.24	951.83	....
Street lighting	408.00	1,599.96	8,282.98	2,750.00	1,578.00
Merchandise	....	....	768.42	....	....
Miscellaneous	67.79	571.87	692.84	394.08	400.22
Total earnings	4,875.95	39,844.78	75,011.30	26,780.40	25,981.63
EXPENSES					
Power purchased	2,985.16	34,740.27	40,546.41	18,674.96	17,706.82
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	21.65	82.68	3,117.56	1,935.50	2,194.23
Line transformer maintenance	....	60.85	418.59	155.25	35.61
Meter maintenance	1.10	114.90	1,350.42	306.60	259.14
Consumers' premises expenses	....	51.22	1.15	632.56	752.87
Street lighting, operation and maintenance	2.00	266.39	2,790.41	305.56	353.80
Promotion of business	....	....	116.96	....	....
Billing and collecting	230.25	....	1,906.15	996.92	781.26
General office, salaries and expenses	18.47	1,929.51	3,556.47	376.94	1,226.66
Undistributed expenses	6.32	12.70	206.68	95.48	67.72
Truck operation and maintenance	....	....	1,277.28	....	395.02
Interest	98.58	292.01	3,307.26	279.82	410.16
Sinking fund and principal payments on debentures	242.09	579.83	8,797.30	682.94	493.73
Depreciation	318.00	1,242.00	5,136.00	1,761.00	1,121.00
Other reserves	....	....	....	154.67	....
Total operating costs and fixed charges	3,923.62	39,372.36	72,528.64	26,358.20	25,798.02
Net surplus	952.33	472.42	2,482.66	422.20	183.61
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	108	292	1,445	477	617
Commercial light service	24	42	224	91	52
Power service	1	10	25	8	13
Total	133	344	1,694	576	682

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Port Dover 1,640	Port Rowan 659	Port Stanley *741	Preston 6,415	Princeton P.V.	Queenston P.V.	Richmond Hill 1,241
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
8,207.88	2,905.63	12,544.27	30,972.58	2,246.88	3,140.55	8,078.16
4,331.54	1,974.72	4,395.21	18,011.03	801.89	1,068.18	4,056.30
4,533.68	109.12	2,882.65	38,998.30	2,393.68	....	1,612.29
....	....	784.06	981.17	....	....	381.23
2,682.12	825.00	2,387.08	5,519.08	468.00	304.32	1,472.00
....	....	....	....	....	....	....
90.04	25.47	462.87	998.88	64.79	32.76	....
19,845.26	5,839.94	23,456.14	95,481.04	5,975.24	4,545.81	15,599.98
10,341.13	2,712.82	14,099.75	69,084.39	4,414.65	2,572.16	11,042.91
....	....	....	4,922.74	....	....	....
....	....	....	66.67	....	....	....
1,682.15	93.42	2,424.46	2,059.78	57.24	112.89	1,389.21
124.42	21.10	34.90	189.56	5.78	....	....
332.95	4.05	226.18	703.71	19.47	....	162.10
72.27	....	261.64	37.00	....	62.55	217.05
435.66	67.93	192.33	350.81	65.26	17.70	215.96
....	....	315.00	....	....	....	17.45
781.23	197.88	1,005.21	1,899.21	204.21	129.20	724.60
777.32	20.70	828.05	2,442.30	50.00	180.36	426.96
172.54	1.93	130.31	842.22	....	6.17	....
30.75	....	332.59	452.67	....	....	....
293.64	423.51	184.42	1,717.91	66.82	180.11	83.91
1,537.23	535.52	1,048.40	3,986.65	164.11	619.52	389.10
1,596.00	403.00	1,550.00	9,690.00	288.00	419.00	658.00
....	....	....	111.00	....	....	....
18,177.29	4,481.86	22,633.24	98,556.62	5,335.54	4,299.66	15,327.25
1,667.97	1,358.08	822.90	....	639.70	246.15	272.73
....	....	....	3,075.58	....	....	....
612	124	665	1,515	82	77	360
116	41	109	226	20	13	68
13	3	8	44	3	....	13
741	168	782	1,785	105	90	441

*Winter population 741; Summer, 3,500 additional.

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Ridgetown	Riverside	Rockwood	Rodney	St. Catharines
Population	1,956	5,090	P.V.	722	27,426
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	8,893.88	38,131.41	3,590.80	3,259.36	130,679.17
Commercial light service	6,361.51	4,232.80	1,021.47	2,656.15	61,578.11
Commercial power service	2,929.25	3,237.15	369.32	2,201.77	160,903.63
Municipal power	871.00	2,180.80	....	....	....
Street lighting	3,142.94	3,302.54	783.00	1,233.00	26,553.75
Merchandise	....	....	....	....	....
Miscellaneous	740.50	1,045.03	7.56	60.87	4,297.39
Total earnings	22,939.08	52,129.73	5,772.15	9,411.15	384,012.05
EXPENSES					
Power purchased	16,387.90	27,050.91	3,587.27	5,687.14	285,719.73
Substation operation	....	....	....	....	6,398.31
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	947.04	1,840.43	287.71	436.52	16,822.82
Line transformer maintenance	102.28	221.49	....	17.26	2,012.32
Meter Maintenance	592.35	650.20	42.75	....	4,639.36
Consumers' premises expenses	254.95	565.39	37.60	18.74	2,033.94
Street lighting, operation and maintenance	625.64	510.81	69.58	171.52	2,280.47
Promotion of business	....	88.00	3.45	27.45	238.12
Billing and collecting	912.26	2,023.04	....	327.35	12,005.36
General office, salaries and expenses	979.08	2,712.00	553.38	380.67	9,012.25
Undistributed expenses	86.31	370.12	1.50	29.94	4,641.83
Truck operation and maintenance	268.55	472.17	....	....	812.15
Interest	284.19	1,963.04	99.29	....	8,214.67
Sinking fund and principal payments on debentures	478.63	5,031.99	101.32	....	5,568.29
Depreciation	1,607.00	4,488.00	519.00	524.00	20,794.00
Other reserves	....	....	....	20.29	....
Total operating costs and fixed charges	23,526.18	47,987.59	5,302.85	7,640.88	381,193.62
Net surplus	....	4,142.14	469.30	1,770.27	2,818.43
Net loss	587.10	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	569	1,299	158	221	6,775
Commercial light service	133	55	35	75	807
Power service	20	7	2	6	158
Total	722	1,361	195	302	7,740

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

St. Clair Beach 110	St. George P.V.	St. Jacobs P.V.	St. Marys 4,017	St. Thomas 16,208	Sarnia 18,155	Scarboro Twp.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,142.95	2,978.05	3,997.99	28,016.58	117,048.75	94,073.85	106,102.65
2,080.01	1,428.34	1,615.17	10,914.34	51,146.37	48,019.68	21,787.85
305.09	2,498.21	4,033.63	19,527.64	49,726.96	155,274.29	10,590.55
....	....	....	3,353.53	5,302.61	4,588.77	13,023.45
....	428.00	460.00	4,992.75	14,834.16	19,217.96	15,154.61
....	....	....	....	....	291.65	....
77.00	82.12	151.07	1,815.32	3,265.61	9,302.60	277.45
4,605.05	7,414.72	10,257.86	68,620.16	241,324.46	330,768.80	166,936.56
2,677.78	4,764.68	7,630.87	38,542.39	168,778.54	218,093.72	88,490.52
....	....	....	1,592.11	7,737.07	8,425.47	....
....	....	....	473.55	1,341.70	124.91	....
225.34	77.76	86.76	3,148.93	9,812.74	7,775.87	6,446.18
43.96	15.28	....	255.21	628.20	516.61	1,303.07
120.11	154.67	45.39	1,548.34	2,303.35	4,757.78	2,532.44
69.46	....	65.74	1,238.39	5,714.32	1,806.70	2,561.18
....	132.49	27.28	1,022.61	3,075.25	5,166.82	1,695.02
....	....	....	583.85	2,349.94	4,116.99	....
185.32	496.87	417.35	1,177.34	5,245.78	7,971.79	6,003.07
54.50	106.24	153.47	1,410.19	9,624.09	11,162.54	5,254.41
....	....	2.64	212.52	4,527.93	5,510.15	1,395.08
101.20	....	....	770.48	1,377.20	1,651.24	1,632.01
144.71	100.25	....	1,659.13	79.31	3,260.86	7,295.79
468.07	283.34	....	2,783.82	....	15,429.89	16,114.02
399.00	367.00	420.00	5,198.00	15,824.00	20,460.00	13,322.00
....	....	....	200.00	....	743.41	....
4,489.45	6,498.58	8,849.50	61,816.86	238,419.42	316,974.75	154,044.79
115.60	916.14	1,408.36	6,803.30	2,905.04	13,794.05	12,891.77
....	....	....	....	....	....	....
68	148	130	1,017	4,265	4,687	4,907
7	37	30	167	619	634	388
2	3	7	41	78	80	35
77	188	167	1,225	4,962	5,401	5,330

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Seaforth	Simcoe	Spring-field	Stamford Twp.	Stouffville
Population	1,708	5,826	378		1,115
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	9,679.71	25,187.36	1,714.68	60,184.34	7,219.03
Commercial light service	5,875.27	28,550.02	813.86	10,303.41	3,340.64
Commercial power service	3,683.20	25,566.87	906.84	13,479.92	964.18
Municipal power	619.83	2,548.86	....	1,669.21	....
Street lighting	2,230.50	4,789.77	583.00	7,765.50	1,524.00
Merchandise	161.94	....	....	913.09	....
Miscellaneous	83.96	2,025.52	245.74	1,516.06	419.46
Total earnings	22,334.41	88,668.40	4,264.12	95,831.53	13,467.31
EXPENSES					
Power purchased	14,704.60	47,822.44	2,666.31	40,160.94	8,297.53
Substation operation	....	....	....	....	....
Substation maintenance	134.29	547.13	....	492.70	....
Distribution system, operation and maintenance	939.03	5,999.82	45.55	6,233.85	1,005.94
Line transformer maintenance	62.13	509.69	....	678.93	....
Meter maintenance	185.10	1,456.37	62.37	2,160.74	143.20
Consumers' premises expenses	422.32	306.09	....	1,139.52	42.26
Street lighting, operation and maintenance	433.58	1,007.47	50.72	869.12	211.16
Promotion of business	....	638.07	....	718.45	....
Billing and collecting	663.15	1,747.21	420.97	2,609.57	449.89
General office, salaries and expenses	976.23	2,901.62	63.39	4,758.08	190.47
Undistributed expenses	174.54	321.91	....	1,202.28	....
Truck operation and maintenance	170.94	468.00	....	1,456.16	....
Interest	....	2,168.14	198.97	6,818.31	85.45
Sinking fund and principal payments on debentures	....	3,808.15	220.46	13,778.29	1,289.37
Depreciation	2,216.00	4,291.00	443.00	7,296.00	632.00
Other reserves	....	5,000.00	....	100.00	20.00
Total operating costs and fixed charges	21,081.91	78,993.11	4,171.74	90,472.94	12,367.27
Net surplus	1,252.50	9,675.29	92.38	5,358.59	1,100.04
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	494	1,446	101	1,853	381
Commercial light service	120	358	33	147	83
Power service	14	41	3	17	5
Total	628	1,845	137	2,017	469

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Stratford 17,615	Strathroy 2,947	Streetsville 672	Sutton 852	Swansea 5,831	Tavistock 1,037	Tecumseh 2,245	Thamesford P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
134,441.07	20,208.96	4,682.95	8,290.38	64,781.02	7,515.36	12,087.58	2,918.51
54,465.10	11,459.54	1,581.23	4,420.53	6,530.04	2,983.94	3,895.90	1,726.57
51,522.25	9,320.59	3,133.52	976.14	13,577.60	8,118.73	2,165.94	1,801.08
8,901.77	1,796.32	....	....	2,367.98	384.30	....	....
16,635.47	4,068.21	935.50	2,047.30	3,599.04	1,317.96	1,366.35	528.00
469.50	199.06	....	....	....	....	....	....
9,620.19	1,517.11	579.09	34.23	897.25	225.95	130.40	438.27
276,055.35	48,569.79	10,912.29	15,768.58	91,752.93	20,546.24	19,646.17	7,412.43
173,616.29	29,832.82	3,331.48	9,307.85	64,010.84	16,160.26	10,207.60	5,698.13
4,386.21	615.56	1,345.31	....	....	....	....	....
1,306.13	....	....	....	....	....	....	....
7,746.79	1,408.35	536.31	290.69	1,559.62	1,198.61	853.02	373.90
187.44	246.01	3.75	....	51.52	194.26	222.54	....
2,695.93	452.83	....	45.17	612.47	219.12	781.94	100.69
3,379.65	955.56	....	187.53	1,490.08	376.57	194.01	59.53
3,677.30	909.77	381.67	178.76	309.11	204.35	214.78	65.81
1,825.14	1,150.85	77.73	....	7.42	....	....	101.00
5,922.28	1,175.84	744.19	521.94	2,854.38	317.71	1,280.50	282.86
8,991.51	2,410.32	326.95	239.71	2,656.28	363.53	1,031.78	121.54
2,691.43	324.94	35.29	38.01	294.83	....	13.88	....
2,572.96	1,018.23	....	360.25	722.86	....	349.08	....
17,775.00	1,452.01	646.77	556.74	4,100.44	138.72	530.19	52.24
8,339.60	1,872.97	954.94	1,759.96	3,938.28	251.59	1,811.46	146.69
24,024.00	3,912.00	733.00	1,049.00	4,371.00	1,042.00	1,720.00	508.00
....	....	27.40	....	....	....	....	....
269,137.66	47,738.06	9,144.79	14,535.61	86,979.13	20,466.72	19,210.78	7,510.39
6,917.69	831.73	1,767.50	1,232.97	4,773.80	79.52	435.39	....
....	....	....	....	....	....	....	97.96
4,252	830	185	426	1,746	284	569	131
602	174	43	86	76	90	53	45
116	31	4	3	13	8	3	7
4,970	1,035	232	515	1,835	382	625	183

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Thamesville 814	Thedford 593	Thorndale P.V.	Thorold 4,904	Tilbury 1,980
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	3,552.32	3,059.67	1,656.32	18,249.51	6,508.68
Commercial light service	2,999.10	2,031.97	854.43	7,248.75	7,513.75
Commercial power service	1,397.44	1,629.72	798.50	35,206.04	7,953.07
Municipal power	206.31	....	....	3,348.14	225.00
Street lighting	1,235.37	1,037.50	384.00	3,391.54	1,753.96
Merchandise	....	....	....	....	0.46
Miscellaneous	314.90	90.37	29.19	1,134.15	844.55
Total earnings	9,705.44	7,849.23	3,722.44	68,578.13	24,799.47
EXPENSES					
Power purchased	6,714.34	4,200.32	2,712.11	46,191.23	16,168.68
Substation operation	....	....	....	3,128.50	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	728.47	177.85	81.41	1,590.37	1,182.69
Line transformer maintenance	35.85	107.05	....	59.78	....
Meter maintenance	124.60	44.20	1.50	473.99	234.28
Consumers' premises expenses	52.90	....	....	368.80	64.54
Street lighting, operation and maintenance	244.73	102.78	68.15	860.80	223.72
Promotion of business	190.67	....	....	126.00	109.53
Billing and collecting	309.00	225.60	77.93	1,555.37	558.66
General office, salaries and expenses	330.34	78.33	25.59	1,501.70	1,053.08
Undistributed expenses	31.21	6.89	....	394.05	147.76
Truck operation and maintenance	....	....	....	124.71	190.23
Interest	....	299.08	51.51	....	367.48
Sinking fund and principal payments on debentures	....	1,139.47	111.12	....	483.16
Depreciation	831.00	471.00	287.00	3,163.78	1,294.00
Other reserves	34.40	....	....	....	....
Total operating costs and fixed charges	9,627.51	6,852.57	3,416.32	59,539.08	22,077.81
Net surplus	77.93	996.66	306.12	9,039.05	2,721.66
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	233	148	68	1,152	445
Commercial light service	80	44	24	161	136
Power service	7	3	2	17	12
Total	320	195	94	1,330	593

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Tillsonburg 3,828	Toronto 648,309	Toronto Twp.	Trafalgar Twp. Area No. 1	Trafalgar Twp. Area No. 2	Wallaceburg 4,537	Wardsville 243
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
16,861.20	4,288,547.59	65,982.08	14,135.14	5,146.40	18,080.67	1,296.67
14,718.12	2,863,274.75	17,002.25	782.60	....	11,531.52	1,268.51
9,258.50	3,740,500.12	10,408.46	595.45	....	52,347.45	58.23
1,645.97	1,116,649.73	....	....	....	1,666.21	....
4,846.54	512,392.10	5,066.95	†368.08	....	4,377.50	720.00
470.36	....	....	....	....	1,611.59	....
382.81	283,325.16	1,300.43	291.00	368.27	3,353.92	58.41
48,183.50	12,804,689.45	99,760.17	16,172.27	5,514.67	92,968.86	3,401.82
30,176.42	6,793,693.21	59,939.01	9,608.55	3,105.30	60,457.69	1,579.76
908.22	201,964.07	....	....	....	261.90	....
....	285,379.44	....	....	....	....	....
2,470.76	307,714.47	3,824.55	2,322.94	230.54	2,748.86	101.73
183.56	32,867.27	129.97	....	....	258.43	....
874.15	128,919.08	653.66	26.15	50.20	695.16	60.02
31.94	224,346.29	1,211.45	....	....	3.17	75.06
957.86	119,144.52	987.69	....	....	468.29	21.78
1.20	164,406.11	....	....	....	160.10	....
1,401.04	420,102.33	4,176.98	....	....	2,850.89	....
3,349.58	324,479.29	4,987.74	1,482.35	657.99	3,535.67	163.03
193.99	*220,145.73	293.33	141.49	....	764.79	....
742.22	....	1,543.40	469.81	....	860.32	....
311.21	1,053,266.04	2,263.46	474.37	522.14	1,883.85	145.46
1,287.01	1,372,489.04	5,669.88	1,213.75	....	3,636.12	552.46
3,953.00	1,036,936.39	10,890.00	1,385.00	409.00	5,670.00	281.00
150.00	....	....	....	....	....	....
46,992.16	12,685,853.28	96,571.12	17,124.41	4,975.17	84,255.24	2,980.30
1,191.34	118,836.17	3,189.05	....	539.50	8,713.62	421.52
....	....	....	952.14	....	....	....
1,087	164,406	2,254	360	161	1,107	49
236	25,370	200	3	....	241	22
33	5,061	29	8	....	36	1
1,356	194,837	2,483	371	161	1,384	72

*Includes $90,000.00 provision for possible York Twp. profit. †Highway lighting.

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality	Water-down	Waterford	Waterloo	Watford	Welland
Population	885	1,238	8,425	975	10,924
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	5,067.78	5,806.67	58,839.56	6,567.31	52,838.63
Commercial light service	1,747.35	2,427.05	24,645.46	2,975.68	32,992.58
Commercial power service	1,184.61	4,597.09	31,757.47	2,827.92	85,803.85
Municipal power	117.42	202.68	3,688.62	312.15	1,312.10
Street lighting	886.00	1,488.00	7,716.08	1,449.49	11,053.01
Merchandise	....	....	229.14	291.00	....
Miscellaneous	98.69	276.19	1,952.22	529.45	7,379.40
Total earnings	9,101.85	14,797.68	128,828.55	14,953.00	191,379.57
EXPENSES					
Power purchased	5,638.06	10,132.79	86,248.78	10,935.15	111,159.57
Substation operation	....	....	2,454.85	....	5,622.64
Substation maintenance	....	....	637.88	....	162.37
Distribution system, operation and maintenance	719.99	1,079.50	5,745.36	862.42	6,192.17
Line transformer maintenance	....	37.25	244.61	....	106.26
Meter Maintenance	91.40	179.68	1,215.62	138.98	3,401.79
Consumers' premises expenses	....	....	3,134.04	365.79	2,061.73
Street lighting, operation and maintenance	163.02	218.93	1,759.25	141.29	1,815.11
Promotion of business	....	....	147.50	46.80	3,002.33
Billing and collecting	533.10	564.52	3,180.11	541.82	3,782.41
General office, salaries and expenses	135.43	388.16	3,114.92	798.31	8,273.38
Undistributed expenses	23.92	81.38	425.04	16.45	845.71
Truck operation and maintenance	....	....	943.86	168.31	1,366.38
Interest	....	....	1,690.97	....	10,226.83
Sinking fund and principal payments on debentures	....	....	5,275.27	....	9,511.42
Depreciation	913.00	1,158.00	10,374.00	967.00	14,358.53
Other reserves	....	....	....	61.85	391.56
Total operating costs and fixed charges	8,217.92	13,840.21	126,592.06	15,044.17	182,280.19
Net surplus	883.93	957.47	2,236.49	....	9,099.38
Net loss	....	....	....	91.17	....
NUMBER OF CONSUMERS					
Domestic service	238	348	1,974	284	2,486
Commercial light service	38	74	258	77	480
Power service	7	12	72	5	80
Total	283	434	2,304	366	3,046

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Wellesley P.V.	West Lorne 784	Weston 5,048	Wheatley 744	Windsor 102,704	Woodbridge 831	Woodstock 11,382
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
2,387.29	3,058.57	44,635.78	4,047.19	707,507.43	6,364.17	69,738.33
1,502.02	1,818.82	10,225.05	3,214.70	344,548.89	1,845.32	39,484.32
1,276.95	2,405.67	45,480.42	1,531.29	503,846.80	4,827.57	73,116.89
....	....	439.70	370.53	20,587.63	434.88	2,913.31
660.00	1,039.17	7,279.51	1,472.00	100,398.12	950.36	8,467.44
....	....	....	....	....	....	....
49.98	25.81	515.13	238.78	1,303.01	86.06	3,743.75
5,876.24	8,348.04	108,575.59	10,874.49	1,678,191.88	14,508.36	197,464.04
4,015.54	4,744.72	85,595.04	5,780.45	902,544.03	11,660.65	141,385.89
....	....	....	....	32,477.59	....	2,786.13
....	....	214.27	....	13,152.73	....	41.88
127.12	161.43	3,644.86	611.04	37,645.42	295.82	5,479.79
....	....	292.57	....	11,739.20	....	....
24.50	17.14	862.06	164.57	32,707.15	176.29	2,526.13
37.91	78.03	2,916.72	....	58,409.54	119.82	1,665.61
68.01	190.82	1,131.35	318.16	31,226.24	124.31	2,001.92
....	27.45	....	12.30	28,440.67	....	2,522.79
231.00	599.14	907.50	528.45	53,358.05	....	3,732.48
197.22	193.00	2,851.02	92.29	38,474.25	693.68	6,106.03
7.64	2.36	388.21	55.37	15,829.00	....	1,850.58
....	....	305.56	....	....	....	654.46
....	....	1,335.53	298.93	44,915.37	258.46	1,866.84
....	....	3,921.81	788.95	134,591.77	381.09	743.47
382.00	729.00	6,275.00	726.00	117,383.00	986.00	14,837.00
....	18.21	....	....	....	....	....
5,090.94	6,761.30	110,641.50	9,376.51	1,552,894.01	14,696.12	188,201.00
785.30	1,586.74	....	1,497.98	125,297.87	....	9,263.04
....	....	2,065.91	....	....	187.76	....
126	201	1,334	215	23,653	268	3,100
55	55	177	73	3,192	50	473
4	9	30	5	447	7	91
185	265	1,541	293	27,292	325	3,664

STATEMENT

Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Concluded

Municipality	Wyoming	*York Twp.	Zurich	NIAGARA SYSTEM SUMMARY
Population	528		P.V.	
EARNINGS	$ c.	$ c.	$ c.	$ c.
Domestic service	2,380.59	681,056.49	2,866.28	10,053,777.92
Commercial light service	1,375.64	90,606.91	2,411.23	5,365,562.66
Commercial power service	388.97	96,170.46	....	8,732,893.41
Municipal power	....	9,347.52	....	1,509,414.58
Street lighting	780.00	51,327.34	693.00	1,396,293.96
Merchandise	....	....	....	14,961.32
Miscellaneous	30.69	18,544.07	140.73	494,932.93
Total earnings	4,955.89	947,052.79	6,111.24	27,567,836.78
EXPENSES				
Power purchased	3,075.87	....	4,161.97	16,366,875.76
Substation operation	....	....	....	401,879.42
Substation maintenance	....	....	....	341,093.86
Distribution system, operation and maintenance	149.88	....	582.61	714,619.94
Line transformer maintenance	....	....	....	79,723.68
Meter maintenance	78.28	†818,232.30	163.67	311,674.98
Consumers' premises expenses	....	....	....	433,740.35
Street lighting, operation and maintenance	152.00	....	87.10	275,924.42
Promotion of business	....	....	....	282,146.27
Billing and collecting	225.26	....	224.90	808,708.74
General office, salaries and expenses	95.58	....	76.21	732,683.97
Undistributed expenses	12.47	....	6.82	341,204.23
Truck operation and maintenance	....	....	....	58,758.66
Interest	....	19,130.43	161.84	1,489,836.42
Sinking fund and principal payments on debentures	....	26,687.45	228.16	2,242,798.84
Depreciation	438.00	25,247.00	468.00	2,003,615.43
Other reserves	....	....	....	27,393.99
Total operating costs and fixed charges	4,227.34	889,297.18	6,161.28	26,912,678.96
Net surplus	728.55	57,755.61	....	655,157.82
Net loss	....	....	50.04	....
NUMBER OF CONSUMERS				
Domestic service	146	20,252	127	398,270
Commercial light service	48	999	48	58,518
Power service	3	155	....	10,525
Total	197	21,406	175	467,313

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*For year ended December 31, 1937. Included inToronto figures. Not added in Summary.
†Toronto Operating Costs.

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

GEORGIAN BAY SYSTEM

Alliston	Arthur	Barrie	Beaverton	Beeton	Bradford	Brechin	Cannington
1,340	1,035	8,135	949	555	988	P.V.	764
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
9,194.42	5,260.15	55,608.64	6,065.90	3,427.61	6,307.31	1,014.97	5,378.49
6,622.35	4,901.84	35,031.45	2,515.43	2,250.76	3,638.39	1,163.79	2,716.72
2,416.74	1,415.88	17,117.06	1,304.74	1,522.63	2,040.38	876.71	575.91
760.37	674.47	1,054.85	....	....	326.90	....	....
1,977.50	1,485.00	6,153.12	1,326.98	1,264.00	1,072.00	468.70	1,122.98
....	....	29.97	....	....	....	....	....
76.59	23.61	556.07	843.92	21.66	69.05	....	112.15
21,047.97	13,760.95	115,551.16	12,056.97	8,486.66	13,454.03	3,524.17	9,906.25
12,628.29	8,405.00	84,983.43	7,623.79	5,559.74	8,003.89	2,492.31	6,189.62
....	....	499.44	....	....	....	....	....
....	....	10.82	....	....	....	....	....
893.99	693.50	7,367.79	721.71	270.82	423.49	264.96	663.67
....	....	1,286.58	....	....	....	....	....
151.25	59.85	322.31	26.84	73.76	237.42	....	163.56
393.55	....	1,635.80	82.53	....	....	....	199.80
263.00	103.43	598.86	209.87	119.67	191.51	124.93	154.54
....	....	38.03	....	....	....	....	....
729.95	....	4,797.81	596.88	192.42	518.60	....	534.32
463.97	453.56	1,938.77	381.03	128.15	219.44	149.43	270.78
40.10	22.75	400.50	3.93	....	39.08	....	....
....	....	651.67	....	....	....	....	....
1,259.11	826.15	817.59	208.15	405.26	884.52	189.56	303.94
1,891.04	959.71	1,660.96	685.42	570.51	1,126.03	127.80	800.35
1,527.00	1,105.00	8,422.08	1,335.00	693.00	1,037.00	171.00	822.00
20.00	....	28.87..	....	....	30.00	....	50.00
20,261.25	12,628.95	115,461.31	11,875.15	8,013.33	12,710.98	3,519.99	10,152.58
786.72	1,132.00	89.85	181.82	473.33	743.05	4.18	....
....	....	....	....	....	....	....	246.33
353	198	2,066	331	127	235	48	255
106	89	417	68	36	67	27	70
14	4	47	9	5	10	4	9
473	291	2,530	408	168	312	79	334

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality	Chatsworth	Chesley	Coldwater	Collingwood	Cookstown P.V.
Population	321	1,815	589	5,478	
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	1,981.46	8,837.28	3,141.65	26,656.94	2,246.66
Commercial light service	1,560.13	4,963.92	1,885.84	12,282.37	1,361.16
Commercial power service		6,271.22	6,460.39	21,283.41	694.84
Municipal power		589.93		1,103.73	
Street lighting	615.00	1,457.00	873.00	3,807.00	840.00
Merchandise		31.12			
Miscellaneous	39.10	329.49	198.26	1,241.08	142.61
Total earnings	4,195.69	22,479.96	12,559.14	66,374.53	5,285.27
EXPENSES					
Power purchased	2,424.75	17,138.44	9,205.42	48,905.55	2,854.64
Substation operation				339.47	
Substation maintenance					
Distribution system, operation and maintenance	99.34	452.46	507.49	1,269.61	341.10
Line transformer maintenance		165.04		97.06	
Meter maintenance		72.07	86.35	612.34	63.56
Consumers' premises expenses		240.18	129.78	107.63	
Street lighting, operation and maintenance	111.53	284.25	144.07	654.69	167.60
Promotion of business		261.92			
Billing and collecting		548.31	345.08	1,940.08	210.48
General office, salaries and expenses	240.18	766.78	187.82	1,149.00	51.10
Undistributed expenses		53.77		165.48	5.61
Truck operation and maintenance		85.31		339.13	
Interest	12.42	1.70	149.87		340.12
Sinking fund and principal payments on debentures	109.64		349.32		387.78
Depreciation	304.00	1,541.00	659.00	4,596.00	591.00
Other reserves			30.00	175.00	
Total operating costs and fixed charges	3,301.86	21,611.23	11,794.20	60,351.04	5,012.99
Net surplus	893.83	868.73	764.94	6,023.49	272.28
Net loss					
NUMBER OF CONSUMERS					
Domestic service	85	427	148	1,350	103
Commercial light service	34	98	52	200	30
Power service		21	3	55	3
Total	119	546	203	1,605	136

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Creemore 632	Dundalk 666	Durham 1,852	Elmvale P.V.	Elmwood P.V.	Flesherton 447	Grand Valley 600	Graven-hurst 2,052
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,148.30	2,868.77	6,661.41	3,046.17	1,310.29	2,482.14	3,309.53	9,613.27
2,065.07	2,772.73	4,984.65	1,889.87	681.98	1,831.52	2,176.68	7,696.93
796.00	2,567.04	3,661.37	2,449.17	1,135.67	213.09	1,263.19	10,000.27
....	....	661.19	142.91	....	....	....	646.95
726.00	1,230.00	1,840.00	718.00	475.19	609.00	884.00	2,092.98
....	....	....	....	....	....	....	....
95.64	135.00	377.66	152.52	104.22	127.36	203.62	301.04
6,831.01	9,573.54	18,186.28	8,398.64	3,707.35	5,263.11	7,837.02	30,351.44
4,696.09	6,685.44	12,191.00	5,281.73	2,142.13	2,395.88	5,872.74	19,261.79
....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....
239.40	698.00	762.46	444.86	43.89	202.95	288.01	2,556.20
....	....	64.86	....	....	120.41	....	287.27
5.00	188.00	204.55	61.02	11.60	78.40	34.67	201.37
....	....	60.20	56.41	....	....	....	221.52
180.16	171.34	175.93	102.69	8.10	100.75	80.80	371.56
....	....	18.21	....	....	50.00	....	22.36
225.52	....	672.01	291.98	....	....	....	1,116.61
50.84	888.09	741.01	198.68	177.69	308.97	630.57	420.57
....	....	40.92	....	....	....	....	597.15
....	....	216.31	....	....	....	....	267.40
1.59	1.08	3.56	98.57	34.37	351.97	....	500.00
....	....	....	356.79	246.76	330.00	....	....
479.00	536.00	1,356.00	773.00	289.00	399.00	645.00	2,362.00
....	....	....	25.00	....	....	....	150.00
5,877.60	9,167.95	16,507.02	7,690.73	2,953.54	4,338.33	7,551.79	28,335.80
953.41	405.59	1,679.26	707.91	753.81	924.78	285.23	2,015.64
....	....	....	....	....	....	....	....
151	173	442	177	64	131	163	502
55	72	104	57	23	54	52	112
3	5	14	8	1	1	4	16
209	250	560	242	88	186	219	630

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality	Hanover	Holstein	Huntsville	Kincardine	Kirkfield
Population	3,191	P.V.	2,707	2,458	P.V.
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	19,572.76	990.17	12,031.50	15,666.78	889.85
Commercial light service	7,865.78	640.45	9,828.51	8,887.73	1,251.14
Commercial power service	19,290.60	130.13	12,249.11	10,118.16	....
Municipal power	298.51	....	1,400.00	1,389.74	....
Street lighting	2,988.00	350.00	2,780.00	4,627.50	480.00
Merchandise	....	....	....	....	....
Miscellaneous	1,073.42	67.50	1,008.32	61.96	0.59
Total earnings	51,089.07	2,178.25	39,297.44	40,751.87	2,621.58
EXPENSES					
Power purchased	31,434.92	1,567.90	27,602.33	24,996.60	1,321.75
Substation operation	....	....	....	335.94	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	1,890.94	30.90	1,828.89	2,065.38	64.38
Line transformer maintenance	24.24	....	....	....	....
Meter maintenance	280.53	25.85	641.41	609.82	....
Consumers' premises expenses	290.81	....	446.03	204.96	....
Street lighting, operation and maintenance	299.69	27.30	469.87	549.55	32.36
Promotion of business	....	....	478.45	10.23	....
Billing and collecting	1,169.31	....	1,195.63	757.00	....
General office, salaries and expenses	998.61	153.12	1,414.01	794.68	103.27
Undistributed expenses	310.64	....	497.28	117.97	....
Truck operation and maintenance	308.59	....	255.17	225.97	....
Interest	559.33	3.84	88.01	952.36	96.99
Sinking fund and principal payments on debentures	3,581.97	....	232.78	4,208.60	465.53
Depreciation	3,915.00	135.00	1,519.00	2,620.00	250.00
Other reserves	....	....	873.65	....	....
Total operating costs and fixed charges	45,064.58	1,943.91	37,542.51	38,449.06	2,334.28
Net surplus	6,024.49	234.34	1,754.93	2,302.81	287.30
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	747	49	674	670	32
Commercial light service	139	20	126	118	20
Power service	23	1	15	17	....
Total	909	70	815	805	52

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Lucknow 1,036	Markdale 781	Meaford 2,719	Midland 6,669	Mildmay 746	Mount Forest 1,946	Neustadt 441	Orangeville 2,479
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,836.80	3,833.57	12,983.77	35,654.70	3,163.08	8,555.89	2,031.96	15,348.73
3,643.50	2,704.92	7,762.61	16,542.12	2,008.67	7,127.86	1,024.43	9,943.00
3,123.89	1,102.56	7,213.02	47,759.33	909.24	3,427.48	390.98	5,615.92
497.57	40.00	875.70	2,778.36	....	906.90	....	1,150.72
1,850.00	905.50	3,008.95	6,376.00	666.00	2,161.00	780.00	2,979.48
....	....	....	....	....	....	....	40.76
169.24	175.25	1,392.34	2,099.92	148.20	212.88	124.85	508.96
16,121.00	8,761.80	33,236.39	111,210.43	6,895.19	22,392.01	4,352.22	35,587.57
9,918.11	5,376.68	20,825.91	77,415.68	4,338.75	17,549.95	1,713.01	24,277.02
....	....	....	1,971.56	....	....	....	....
....	....	....	707.69	....	....	....	....
160.92	259.20	2,002.82	3,772.78	186.52	815.93	6.34	1,685.43
....	103.54	59.24	126.43	....	....	23.98	....
88.58	108.25	149.24	1,002.83	81.65	117.35	8.56	202.80
....	15.60	124.49	320.32	138.58	....	....	205.91
91.63	85.88	380.68	642.40	126.57	315.46	82.08	583.76
....	....	....	442.91	....	....	....	100.00
....	....	762.75	2,667.18	....	665.84	....	1,246.18
1,100.33	566.41	706.00	1,730.87	317.87	123.48	254.97	513.41
....	....	165.99	1,401.81	....	37.77	....	67.11
....	....	113.99	271.56	....	154.43	....	....
364.89	243.61	1,334.62	795.62	523.75	475.68	125.93	160.46
1,272.95	410.23	1,944.73	4,689.81	521.03	829.65	1,279.84	98.95
903.00	678.00	1,660.00	11,494.00	259.00	1,577.00	683.00	2,334.00
....	....	15.00	....	....	....	....	....
13,900.41	7,847.40	30,245.46	109,453.45	6,493.72	22,662.54	4,177.71	31,475.03
2,220.59	914.40	2,990.93	1,756.98	401.47	....	174.51	4,112.54
....	....	....	....	....	270.53	....	....
268	223	664	1,584	161	471	93	686
79	87	141	222	51	153	26	156
6	10	19	62	3	13	1	25
353	320	824	1,868	215	637	120	867

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Continued

Municipality Population	Owen Sound 13,118	Paisley 773	Penetanguishene 4,177	Port Elgin 1,293	Port McNicoll 911
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	61,153.39	3,934.83	11,674.28	8,722.32	3,639.61
Commercial light service	40,557.61	2,946.10	6,519.25	5,366.44	836.47
Commercial power service	43,128.16	845.69	15,384.22	2,665.65	....
Municipal power	....	....	2,673.86	578.60	....
Street lighting	13,476.58	1,260.00	2,226.00	2,518.04	964.00
Merchandise	577.39	....	....	....	....
Miscellaneous	1,090.99	203.34	87.28	485.27	0.79
Total earnings	159,984.12	9,189.96	38,564.89	20,336.32	5,440.87
EXPENSES					
Power purchased	115,903.83	5,552.01	22,810.22	13,151.52	2,772.99
Substation operation	....	....	155.63	....	....
Substation maintenance	3,238.41	....	....	....	....
Distribution system, operation and maintenance	3,920.18	353.82	2,292.87	1,069.17	432.17
Line transformer maintenance	948.29	15.57	89.25	....	....
Meter maintenance	1,767.07	2.60	125.27	62.90	132.80
Consumers' premises expenses	160.10	....	266.53	257.25	....
Street lighting, operation and maintenance	1,853.40	51.25	480.94	322.54	154.10
Promotion of business	....	....	....	....	....
Billing and collecting	5,919.78	....	1,102.33	636.38	373.36
General office, salaries and expenses	5,700.83	504.83	581.19	275.23	265.28
Undistributed expenses	2,490.89	....	168.51	39.92	51.41
Truck operation and maintenance	1,143.24	....	229.43	139.50	....
Interest	52.59	367.86	401.89	1,582.89	46.46
Sinking fund and principal payments on debentures	....	971.01	2,092.30	1,787.31	162.27
Depreciation	8,157.00	605.00	3,341.00	1,082.00	460.00
Other reserves	400.00	....	200.00	....	....
Total operating costs and fixed charges	151,655.61	8,423.95	34,337.36	20,406.61	4,850.84
Net surplus	8,328.51	766.01	4,227.53	....	590.03
Net loss	....	....	....	70.29	....
NUMBER OF CONSUMERS					
Domestic service	3,315	193	647	435	209
Commercial light service	564	55	104	102	24
Power service	114	4	27	6	....
Total	3,993	252	778	543	233

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Port Perry 1,118	Priceville P.V.	Ripley 432	Rosseau 300	Shelburne 1,099	South-ampton 1,202	Stayner 1,034	Sunder-land P.V.
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
6,846.61	750.50	3,527.58	2,823.64	5,612.68	9,556.40	4,736.16	2,574.87
3,144.58	287.48	1,608.17	1,119.75	3,814.48	3,690.09	3,168.92	1,741.17
2,607.63	120.71	837.17	....	1,945.18	2,682.87	1,868.09	238.44
313.93	....	....	....	529.07	1,123.91	....	....
1,433.75	560.00	1,070.00	1,102.50	864.00	2,298.81	1,320.00	720.00
....	....	....	....	....	....	....	....
542.15	4.89	6.71	31.48	314.62	153.32	288.29	15.09
14,888.65	1,723.58	7,049.63	5,077.37	13,080.03	19,505.40	11,381.46	5,289.57
11,470.30	648.73	3,774.86	3,048.63	8,951.40	10,884.35	7,977.91	3,570.20
....	....	....	....	....	....	....	....
....	....	....	....	....	....	....	....
950.19	3.93	123.31	264.74	763.27	959.31	614.27	248.97
....	....	....	....	172.95	47.10	....	....
14.03	....	22.52	72.80	108.80	68.55	89.70	73.04
....	....	....	....	....	196.24	22.73	....
222.87	26.53	37.63	59.76	198.01	223.83	188.63	159.22
....	....	....	....	....	....	....	....
718.56	....	....	210.74	488.23	816.20	522.26	288.30
335.19	77.12	504.09	88.51	281.18	487.23	389.80	140.18
....	....	....	....	....	36.26	19.06	....
....	....	....	....	....	140.95	....	....
692.66	83.88	519.10	689.19	42.46	883.15	32.12	1.68
1,000.33	439.22	510.92	446.16	375.94	1,404.30	....	....
989.00	220.00	557.00	280.00	1,128.00	1,010.00	1,034.00	347.00
....	....	....	....	....	....	20.00	....
16,393.13	1,499.41	6,049.43	5,160.53	12,510.24	17,157.47	10,910.48	4,828.59
....	224.17	1,000.20	....	569.79	2,347.93	470.98	460.98
1,504.48	....	....	83.16	....	....	....	....
331	36	127	63	296	472	264	115
78	10	49	18	81	90	92	45
11	1	1	....	14	12	12	2
420	47	177	81	391	574	368	162

STATEMENT

Detailed Operating Reports of Electrical Departments of

GEORGIAN BAY SYSTEM—Concluded

Municipality	Tara	Teeswater	Thornton	Tottenham	Uxbridge
Population	472	838	P.V.	526	1,527
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	3,165.71	4,979.86	1,476.17	3,582.65	7,996.45
Commercial light service	1,684.69	2,578.69	546.45	2,343.43	4,258.76
Commercial power service	1,160.69	1,157.23	268.64	276.19	823.77
Municipal power		180.00		197.35	
Street lighting	1,301.00	1,294.00	660.00	931.00	1,719.00
Merchandise					
Miscellaneous	5.24	147.10	0.79	17.59	13.70
Total earnings	7,317.33	10,336.88	2,952.05	7,348.21	14,811.68
EXPENSES					
Power purchased	3,680.27	5,702.79	1,378.50	4,389.12	11,389.62
Substation operation					
Substation maintenance					
Distribution system, operation and maintenance	44.29	191.24	69.90	335.44	410.26
Line transformer maintenance		9.25			
Meter maintenance	9.90	76.35		100.10	157.58
Consumers' premises expenses		53.25			78.84
Street lighting, operation and maintenance	71.88	132.98	37.03	105.26	160.71
Promotion of business		36.79			
Billing and collecting				268.63	610.77
General office, salaries and expenses	612.75	628.84	70.38	143.03	454.05
Undistributed expenses		17.72			12.70
Truck operation and maintenance					
Interest	100.49	445.30	85.10	307.22	
Sinking fund and principal payments on debentures	570.10	1,552.03	568.79	496.17	
Depreciation	650.00	850.00	377.00	491.00	812.00
Other reserves					45.00
Total operating costs and fixed charges	5,739.68	9,696.54	2,586.70	6,635.97	14,131.53
Net surplus	1,577.65	640.34	365.35	712.24	680.15
Net loss					
NUMBER OF CONSUMERS					
Domestic service	148	227	62	137	397
Commercial light service	38	57	12	47	99
Power service	5	5	2	6	9
Total	191	289	76	190	505

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Victoria Harbor 1,092	Walkerton 2,358	Waubaushene P.V.	Wiarton 1,743	Windermere 128	Wingham 2,085	Woodville 418	GEORGIAN BAY SYSTEM SUMMARY
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,023.24	15,177.95	2,808.35	7,875.41	2,602.82	12,228.59	2,078.04	497,669.03
958.44	9,027.13	692.73	7,982.04	1,202.38	7,688.70	1,043.76	299,032.01
....	5,378.16	676.34	3,096.11	85.18	10,091.04	541.76	291,275.05
108.55	603.53	95.68	1,572.46	....	470.83	....	23,746.57
663.00	2,840.11	464.00	2,304.03	390.00	3,372.00	620.03	107,361.73
....	378.80	....	....	....	1,485.73	....	2,543.77
....	1,014.79	....	496.91	7.96	1,127.11	212.06	18,461.55
4,753.23	34,420.47	4,737.10	23,326.96	4,288.34	36,464.00	4,495.65	1,240,089.71
2,335.34	19,646.09	3,207.49	13,368.50	1,804.29	16,821.35	3,276.17	820,796.76
....	....	....	....	....	1,790.93	....	5,092.97
....	....	....	....	....	....	....	3,956.92
212.53	1,145.88	147.93	458.32	245.81	2,500.98	354.46	52,089.37
....	181.12	....	....	....	....	....	3,822.18
14.98	634.71	74.24	124.87	31.10	521.57	88.54	10,344.81
....	319.39	....	....	....	....	30.01	6,258.44
141.28	590.15	91.34	278.37	38.21	303.03	127.69	14,063.15
....	....	....	....	....	....	....	1,458.90
342.10	1,069.88	....	904.89	152.10	597.08	243.62	36,449.15
201.54	1,437.71	373.04	426.18	63.60	1,516.72	145.99	34,297.95
....	160.07	....	79.52	....	211.99	....	7,255.91
....	674.52	....	140.16	....	535.92	....	5,893.25
0.79	2,502.02	51.74	1,557.51	541.71	1,852.54	100.43	25,055.40
....	2,553.26	....	1,443.56	494.30	1,631.65	305.58	47,943.38
513.00	1,640.00	399.00	932.00	359.00	3,535.00	261.00	87,698.08
....	....	50.00	....	....	....	50.00	2,162.52
3,761.56	32,554.80	4,394.78	19,713.88	3,730.12	31,818.76	4,983.49	1,164,639.14
991.67	1,865.67	342.32	3,613.08	558.22	4,645.24	....	75,450.57
....	....	....	....	....	....	487.84	....
208	604	204	391	56	561	110	23,459
29	140	23	116	13	148	31	5,226
1	17	4	16	1	24	2	727
238	761	231	523	70	733	143	29,412

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM

Municipality	Alexandria	Apple Hill	Athens	Bath	Belleville
Population	1,919	P.V.	691	346	14,560
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	7,097.15	1,255.45	3,110.74	1,675.92	75,477.81
Commercial light service	5,294.52	850.48	1,520.14	823.16	47,956.73
Commercial power service	2,345.39	355.80	945.61	....	34,898.79
Municipal power	788.96	....	....	....	3,477.21
Street lighting	1,936.00	478.48	1,055.00	525.00	9,607.71
Merchandise	....	2.48	....	....	3,759.21
Miscellaneous	415.20	....	145.31	2.69	3,958.15
Total earnings	17,877.22	2,942.69	6,776.80	3,026.77	179,135.61
EXPENSES					
Power purchased	9,611.22	1,528.57	4,420.03	1,881.23	128,500.38
Substation operation	....	....	....	....	2,407.63
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	706.11	88.40	169.69	86.55	3,018.89
Line transformer maintenance	23.85	....	....	....	491.57
Meter maintenance	282.49	49.03	5.55	....	1,411.19
Consumers' premises expenses	....	....	....	....	3,725.16
Street lighting, operation and maintenance	175.68	22.00	60.75	9.98	1,736.86
Promotion of business	....	....	....	....	238.39
Billing and collecting	928.41	....	....	....	3,132.73
General office, salaries and expenses	434.68	262.55	251.97	149.92	7,513.39
Undistributed expenses	57.91	....	....	....	1,399.41
Truck operation and maintenance	....	....	....	....	....
Interest	561.15	116.36	522.04	414.35	267.71
Sinking fund and principal payments on debentures	2,928.08	406.74	650.08	281.12	....
Depreciation	1,570.00	196.00	542.00	217.00	7,650.00
Other reserves	200.00	....	100.00	....	....
Total operating costs and fixed charges	17,479.58	2,669.65	6,722.11	3,040.15	161,493.31
Net surplus	397.64	273.04	54.69	....	17,642.30
Net loss	....	....	....	13.38	....
NUMBER OF CONSUMERS					
Domestic service	329	54	163	44	3,285
Commercial light service	108	22	50	18	610
Power service	13	2	1	....	97
Total	450	78	214	62	3,992

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Bloomfield 666	Bowmanville 3,850	Brighton 1,366	Brockville 9,983	Cardinal 1,529	Carleton Place 4,278	Chesterville 1,068	Cobden 621
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,118.12	27,271.72	8,868.36	48,290.09	6,786.01	17,670.96	4,449.42	2,230.69
1,484.35	9,787.18	3,816.07	27,282.22	2,196.41	9,078.08	3,641.15	2,426.74
804.59	45,892.95	2,814.72	33,911.59	593.79	23,131.16	1,938.02	357.96
....	....	....	4,284.60	....	1,374.92	....	....
660.00	3,268.31	2,055.00	8,764.00	962.00	4,814.54	1,059.16	852.00
....	....	52.06	....	....	....	386.33	....
22.48	2,399.64	167.26	6,270.78	147.39	1,794.37	460.05	36.41
6,089.54	88,619.80	17,773.47	128,803.28	10,685.60	57,864.03	11,934.13	5,903.80
4,250.16	65,318.23	8,717.05	82,345.23	6,065.72	39,132.93	7,135.65	3,558.40
....	38.27	....	5,236.67	....	....	....	....
....	....	....	362.08	....	174.36	....	....
152.87	2,349.64	2,010.77	2,994.67	1,022.96	1,741.17	1,185.17	80.29
....	32.46	18.90	469.36	....	320.32	....	....
11.49	527.92	152.70	1,892.66	34.45	923.10	17.00	41.04
29.17	563.66	117.56	168.42	....	613.81	211.11	....
156.04	560.88	194.11	1,344.55	156.81	464.77	203.74	139.20
20.00	294.96	154.05	278.02	89.74	408.56	....	....
....	2,063.69	446.88	2,281.18	....	1,555.31	528.61	295.95
300.23	2,080.04	1,053.00	5,078.07	596.49	3,399.78	511.12	101.19
....	1,052.94	417.38	1,427.80	....	616.79	....	....
....	....	468.45	663.06	....	418.98	....	....
322.38	1,272.64	757.49	....	534.75	1,948.15	97.34	386.22
540.40	2,912.40	1,074.21	....	500.00	3,224.60	249.65	514.28
600.00	2,556.00	726.00	10,256.00	495.00	2,400.00	635.00	129.00
....	....	....	....	50.00	....	....	....
6,382.74	81,623.73	16,308.55	114,797.77	9,545.92	57,342.63	10,774.39	5,245.57
....	6,996.07	1,464.92	14,005.51	1,139.68	521.40	1,159.74	658.23
293.20	....	....	....	....	....	....	....
177	1,143	519	2,823	365	998	242	108
36	154	94	435	62	196	69	50
7	27	10	72	3	18	3	1
220	1,324	623	3,330	430	1,212	314	159

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Cobourg	Colborne	Deseronto	Finch	Hastings
Population	5,125	964	1,300	371	762
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	30,102.72	4,870.29	5,573.01	2,108.48	3,876.91
Commercial light service	19,118.32	3,005.24	2,196.33	1,624.33	2,012.09
Commercial power service	22,006.94	612.15	1,254.31	354.43	251.45
Municipal power	2,005.84	214.20	727.97		
Street lighting	5,768.56	1,471.00	1,339.92	456.00	1,271.39
Merchandise		167.81			
Miscellaneous	2,315.60	235.85	176.75	150.88	440.30
Total earnings	81,317.98	10,576.54	11,268.29	4,694.12	7,852.14
EXPENSES					
Power purchased	47,578.55	5,255.41	6,719.99	2,808.00	3,724.70
Substation operation	103.65				
Substation maintenance					
Distribution system, operation and maintenance	3,609.46	1,071.57	1,683.52	226.58	500.72
Line transformer maintenance	302.28		31.71		
Meter maintenance	1,482.41	127.19	29.90	23.40	341.39
Consumers' premises expenses	287.83				
Street lighting, operation and maintenance	1,268.71	144.55	399.92	64.05	121.05
Promotion of business	*5,456.50	107.29	347.68	62.64	
Billing and collecting	2,721.49		387.43		
General office, salaries and expenses	4,028.69	1,358.03	537.40	291.42	500.91
Undistributed expenses	916.14	135.37	158.05		32.47
Truck operation and maintenance		464.95	241.42		
Interest	2,252.40	649.12	144.10	269.50	927.34
Sinking fund and principal payments on debentures	4,726.29	514.79	615.30	340.79	830.43
Depreciation	3,943.00	352.00	462.00	313.00	584.00
Other reserves					
Total operating costs and fixed charges	78,677.40	10,180.27	11,758.42	4,399.38	7,563.01
Net surplus	2,640.58	396.27		294.74	289.13
Net loss			490.13		
NUMBER OF CONSUMERS					
Domestic service	1,282	256	301	96	196
Commercial light service	252	76	67	35	50
Power service	50	5	7	1	4
Total	1,584	337	375	132	250

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*Includes extraordinary expenditure in respect to three wire services converting Gas customers to Electric customers.

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Havelock 1,164	Kemptville 1,204	Kingston 24,331	Lakefield 1,332	Lanark 702	Lancaster 588	Lindsay 7,294
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
5,008.14	6,934.59	130,998.05	5,777.12	2,959.64	1,936.30	40,425.68
2,707.53	4,633.63	84,357.06	4,209.36	1,488.67	1,634.62	26,070.16
2,328.40	4,109.04	98,702.30	3,326.84	....	....	25,563.07
....	....	8,235.56	....	....	....	2,611.66
1,497.00	1,768.00	22,456.17	1,732.44	585.00	850.00	6,439.44
....	....	....	....	....	....	....
474.62	1,020.90	1,403.34	68.89	111.48	6.04	5,040.17
12,015.69	18,466.16	346,152.48	15,114.65	5,144.79	4,426.96	106,150.18
6,325.67	10,956.69	222,456.83	8,974.60	2,857.28	2,165.75	72,140.46
....	....	5,181.89	....	....	....	....
....	....	2,144.34	....	....	....	....
1,024.64	1,405.43	14,390.61	970.68	143.80	116.66	1,817.08
....	2.02	1,125.46	....	....	....	690.98
....	201.67	4,500.32	223.23	14.25	22.47	2,114.58
....	122.59	6,069.27	....	....	....	1,484.86
132.05	202.27	4,022.21	277.35	48.75	22.16	1,992.29
....	190.52	346.86	128.70	....	....	50.46
....	1,062.88	6,237.40	369.42	....	....	2,982.22
566.16	400.32	11,670.28	581.86	393.45	275.00	6,428.71
....	202.60	7,747.87	117.66	....	....	1,313.37
208.49	322.68	2,487.18	....	....	....	....
492.23	999.42	5,305.67	1,001.05	39.53	....	4,179.91
2,376.14	851.52	4,439.50	1,131.36	....	....	6,099.11
996.00	1,186.00	26,877.00	1,342.00	331.00	339.00	4,651.00
....	....	2,500.00	....	....	....	....
12,121.38	18,106.61	327,502.69	15,117.91	3,828.06	2,941.04	105,945.03
....	359.55	18,649.79	....	1,316.73	1,485.92	205.15
105.69	....	....	3.26	....	....	....
287	337	6,239	323	160	88	1,961
63	84	927	66	38	34	331
3	7	142	6	....	....	72
353	428	7,308	395	198	122	2,364

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Madoc	Marmora	Martintown P.V.	Maxville	Napanee
Population	1,210	1,014		758	3,018
EARNINGS	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	4,793.35	3,356.04	850.48	3,587.46	22,793.81
Commercial light service	3,526.75	1,822.96	932.70	2,596.03	14,261.30
Commercial power service	1,256.25	393.07	....	....	9,510.30
Municipal power	....	....	....	....	770.10
Street lighting	1,500.00	1,298.00	195.00	1,188.00	4,215.00
Merchandise	....	....	....	....	1,597.82
Miscellaneous	104.64	43.20	43.92	77.62	876.66
Total earnings	11,180.99	6,913.27	2,022.10	7,449.11	54,024.99
EXPENSES					
Power purchased	7,297.09	3,813.73	1,193.60	3,791.75	32,110.53
Substation operation	....	....	....	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	1,009.17	358.56	35.21	376.97	3,219.18
Line transformer maintenance	....	....	....	....	123.16
Meter maintenance	35.62	10.70	0.75	123.97	672.20
Consumers' premises expenses	....	....	....	36.55	445.96
Street lighting, operation and maintenance	199.13	157.69	12.50	217.95	423.30
Promotion of business	196.70	33.98	....	39.52	170.72
Billing and collecting	....	....	....	....	1,853.89
General office, salaries and expenses	979.22	639.94	142.83	337.41	4,647.86
Undistributed expenses	34.47	....	....	....	1,750.74
Truck operation and maintenance	....	....	....	....	....
Interest	....	282.94	....	178.04	459.61
Sinking fund and principal payments on debentures	....	987.56	....	1,140.20	3,007.78
Depreciation	468.00	588.00	165.00	578.00	1,808.00
Other reserves	....	....	....	100.00	....
Total operating costs and fixed charges	10,219.40	6,873.10	1,549.89	6,920.36	50,692.93
Net surplus	961.59	40.17	472.21	528.75	3,332.06
Net loss	....	....	....	....	....
NUMBER OF CONSUMERS					
Domestic service	275	217	45	151	816
Commercial light service	90	48	23	49	197
Power service	6	3	....	....	30
Total	371	268	68	200	1,043

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Newcastle	Norwood	Omemee	Oshawa	Ottawa	Perth	Peterborough
690	716	598	24,844	142,852	4,183	23,450
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
5,808.74	4,236.22	2,293.70	168,723.26	515,503.30	23,491.92	146,900.81
2,335.43	2,305.12	1,644.84	66,447.93	191,360.07	13,786.32	79,392.37
1,735.45	534.87	2,461.88	224,942.09	52,697.64	12,914.98	103,271.24
....	....	....	8,436.13	20,787.57	1,629.71	7,199.91
738.68	1,581.00	1,013.70	12,040.66	78,283.99	2,569.50	22,246.84
....	....	....	....	....	1,391.20	....
62.40	663.56	64.27	8,992.31	3,529.07	3,261.17	2,509.83
10,680.70	9,320.77	7,478.39	489,582.38	862,161.64	59,044.80	361,521.00
4,448.71	3,256.51	4,517.57	396,892.05	399,442.33	36,421.40	227,750.55
....	....	....	59.56	28,044.87	384.76	6,758.99
....	....	....	....	932.84	....	280.73
90.95	786.86	435.20	7,326.49	24,855.72	1,374.22	8,651.13
12.29	....	16.50	598.90	1,685.66	120.05	681.43
84.64	9.83	39.85	4,330.74	11,123.14	712.65	6,639.43
208.95	....	....	5,031.67	3,871.13	907.72	10,456.97
15.02	138.78	132.03	2,157.69	36,465.30	436.26	4,181.65
6.00	107.40	....	2,265.96	9,573.20	179.05	902.00
844.88	....	....	9,194.51	43,661.33	1,957.97	5,747.06
171.38	467.21	252.00	8,327.43	32,191.96	3,299.96	7,124.45
16.89	....	12.41	4,216.72	13,051.40	526.23	4,788.71
....	214.25	....	....	2,120.96	580.49	1,689.32
643.96	1,381.66	28.80	7,119.97	27,885.85	3,348.56	27,491.87
455.36	1,373.28	232.76	13,952.82	16,951.10	1,908.68	14,263.54
723.00	1,160.00	703.00	12,000.00	88,646.00	4,002.00	18,567.00
....	....	....	....	21,616.13	....	900.00
7,722.03	8,895.78	6,370.12	473,474.51	762,118.92	56,160.00	346,874.83
2,958.67	424.99	1,108.27	16,107.87	100,042.72	2,884.80	14,646.17
....	....	....	....	....	....	....
195	225	153	6,278	13,645	1,016	5,590
36	59	45	554	1,355	200	910
5	2	6	107	181	26	159
236	286	204	6,939	15,181	1,242	6,659

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM—Continued

Municipality	Picton	Port Hope	Prescott	Richmond	Russell
Population	3,410	4,577	2,850	419	P.V.
Earnings	$ c.	$ c.	$ c.	$ c.	$ c.
Domestic service	20,642.09	25,170.67	16,299.10	1,790.11	2,486.88
Commercial light service	14,849.30	12,345.72	9,492.85	1,470.18	1,489.13
Commercial power service	4,335.14	26,790.32	3,618.24	....	....
Municipal power	1,589.41	1,381.76	1,176.35	....	....
Street lighting	3,858.60	3,988.07	3,646.00	416.00	752.00
Merchandise	926.28	....	....	....	....
Miscellaneous	1,736.09	1,386.56	314.83	19.50	112.95
Total earnings	47,936.91	71,063.10	34,547.37	3,695.79	4,840.96
Expenses					
Power purchased	35,972.35	52,684.38	22,483.10	2,167.44	2,444.13
Substation operation	....	....	1,344.74	....	....
Substation maintenance	....	....	....	....	....
Distribution system, operation and maintenance	2,023.72	1,420.85	3,548.61	90.21	213.98
Line transformer maintenance	40.60	20.66	....	....	....
Meter maintenance	660.71	1,004.03	129.05	....	50.25
Consumers' premises expenses	764.24	445.95	303.49	....	....
Street lighting, operation and maintenance	352.95	1,222.11	762.02	24.36	66.05
Promotion of business	806.13	....	....	....	....
Billing and collecting	1,346.27	2,048.50	1,172.81	....	....
General office, salaries and expenses	2,110.75	3,502.69	2,206.23	183.14	445.74
Undistributed expenses	469.02	938.47	325.22	....	....
Truck operation and maintenance	464.85	292.50	....	....	....
Interest	....	....	....	269.18	291.54
Sinking fund and principal payments on debentures	....	....	....	297.52	545.25
Depreciation	2,300.00	2,506.00	3,135.00	251.00	327.00
Other reserves	....	....	....	....	....
Total operating costs and fixed charges	47,311.59	66,086.14	35,410.27	3,282.85	4,383.94
Net surplus	625.32	4,976.96	....	412.94	457.02
Net loss	....	....	862.90	....	....
Number of Consumers					
Domestic service	975	1,319	742	61	118
Commercial light service	195	213	176	28	35
Power service	33	39	20	....	....
Total	1,203	1,571	938	89	153

"B"—Continued

Hydro Municipalities for Year Ended December 31, 1938

Smiths Falls 7,626	Stirling 938	Trenton 6,480	Tweed 1,256	Warkworth P.V.	Wellington 907	Westport 710	Whitby 3,706
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
43,924.81	4,906.62	29,248.48	5,637.58	1,910.51	5,837.98	3,380.56	22,465.80
15,573.64	3,299.13	19,261.14	4,934.43	1,255.59	2,391.24	3,243.79	11,879.36
22,218.20	1,292.28	53,096.36	2,821.75	....	2,170.95	....	13,286.42
343.85	380.56	1,809.53	248.01	....	....	....	1,439.57
8,713.92	1,607.04	6,350.75	2,061.21	595.00	1,041.00	1,247.06	4,059.06
....	145.16	195.68	407.31	....	....	....	....
2,748.32	346.20	919.46	259.51	143.51	256.70	159.27	3,351.04
93,522.74	11,976.99	110,881.40	16,369.80	3,904.61	11,697.87	8,030.68	56,481.25
51,042.66	6,730.27	77,729.13	9,651.00	2,676.70	6,765.06	4,228.88	34,149.39
436.40	150.50	....	....	....	....	....	419.47
372.50	....	69.49	....	....	....	....	....
3,491.83	577.09	2,438.37	1,001.09	83.32	740.25	244.06	3,164.67
220.14	....	157.39	4.55	....	....	....	178.64
1,373.99	121.89	1,480.02	38.43	78.09	....	3.38	586.41
2,455.77	....	582.76	....	....	185.51	....	1,113.25
746.70	260.49	710.80	217.46	36.95	107.83	107.50	702.94
1,323.51	....	23.60	....	....	....	....	309.86
3,581.43	490.47	2,999.81	780.98	....	....	....	1,474.45
3,084.74	1,104.14	5,538.87	841.23	201.51	592.96	856.97	2,167.08
440.31	48.01	1,744.59	279.61	....	38.22	....	163.42
1,134.38	188.04	731.11	124.56	....	....	29.42	....
730.95	....	2,597.78	421.32	502.37	529.46	621.62	1,452.40
4,737.27	....	6,768.23	....	296.77	876.88	593.17	2,873.67
6,826.00	899.00	4,933.00	549.00	253.00	845.00	252.00	3,576.00
500.00	....	....	144.00	....	....	....	....
82,498.58	10,569.90	108,504.95	14,053.23	4,128.71	10,681.17	6,937.00	52,331.65
11,024.16	1,407.09	2,376.45	2,316.57	....	1,016.70	1,093.68	4,149.60
....	....	....	....	224.10	....	....	....
1,806	296	1,417	302	137	316	106	899
278	83	262	94	43	67	51	164
44	12	52	13	....	6	....	21
2,128	391	1,731	409	180	389	157	1,084

STATEMENT

Detailed Operating Reports of Electrical Departments of

EASTERN ONTARIO SYSTEM—Concluded **THUNDER BAY**

Municipality Population	Williamsburg P.V.	Winchester 1,041	EASTERN ONTARIO SYSTEM SUMMARY	Fort William 24,020
EARNINGS	$ c.	$ c.	$ c.	$ c.
Domestic service	2,239.66	5,925.51	1,542,078.82	196,286.31
Commercial light service	4,366.35	3,545.45	759,023.69	62,034.35
Commercial power service	126.08	1,315.25	847,288.06	37,991.12
Municipal power			70,913.38	25,864.22
Street lighting	240.00	944.00	248,062.20	18,872.14
Merchandise		51.75	9,083.09	
Miscellaneous	468.83	394.35	60,110.32	6,656.14
Total earnings	7,440.92	12,176.31	3,536,559.56	347,704.28
EXPENSES				
Power purchased	4,430.48	7,912.48	2,196,432.00	250,991.46
Substation operation			50,567.40	7,662.76
Substation maintenance			4,336.34	227.54
Distribution system, operation and maintenance	292.03	597.90	111,015.57	11,351.61
Line transformer maintenance			7,368.88	957.90
Meter maintenance	62.75	375.57	44,177.52	7,603.06
Consumers' premises expenses	199.14	130.26	40,532.76	2,020.26
Street lighting, operation and maintenance	161.78	79.87	64,017.84	6,777.43
Promotion of business			24,112.00	12.96
Billing and collecting		590.73	102,738.69	12,705.65
General office, salaries and expenses	704.71	298.55	131,185.62	5,410.52
Undistributed expenses			44,440.20	3,526.10
Truck operation and maintenance			12,845.09	1,564.98
Interest		259.18	99,957.91	13,530.67
Sinking fund and principal payments on debentures		514.52	106,983.15	7,943.17
Depreciation	266.00	699.00	226,373.00	15,213.00
Other reserves			26,110.13	1,889.74
Total operating costs and fixed charges	6,116.89	11,458.06	3,293,194.10	349,388.81
Net surplus	1,324.03	718.25	243,365.46	
Net loss				1,684.53
NUMBER OF CONSUMERS				
Domestic service	114	286	59,276	5,740
Commercial light service	62	78	9,322	917
Power service	1	3	1,320	117
Total	177	367	69,918	6,774

"B"—Concluded

Hydro Municipalities for Year Ended December 31, 1938

SYSTEM			NORTHERN ONTARIO PROPERTIES—SUDBURY DISTRICT			
Nipigon Twp.	Port Arthur 20,302	THUNDER BAY SYSTEM SUMMARY	Capreol 1,730	Sudbury 26,315	SUDBURY DISTRICT SUMMARY	ALL SYSTEMS GRAND SUMMARY
$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
3,652.40	109,993.88	309,932.59	9,043.00	195,099.94	204,142.94	12,607,601.30
3,851.60	61,850.92	127,736.87	4,003.50	172,015.75	176,019.25	6,727,374.48
174.87	577,863.60	616,029.59	....	40,145.25	40,145.25	10,527,631.36
461.87	34,503.15	60,829.24	735.77	11,429.80	12,165.57	1,677,069.34
649.00	19,602.26	39,123.40	1,530.00	21,183.98	22,713.98	1,813,555.27
....	....	....	....	....	....	26,588.18
....	18,867.76	25,523.90	....	2,984.10	2,984.10	602,012.80
8,789.74	822,681.57	1,179,175.59	15,312.27	442,858.82	458,171.09	33,981,832.73
4,041.71	711,161.05	966,194.22	5,495.57	219,663.64	225,159.21	20,575,457.95
....	23,363.10	31,025.86	....	5,085.41	5,085.41	493,651.06
....	1,399.28	1,626.82	....	....	....	351,013.94
234.28	16,072.35	27,658.24	1,555.66	14,126.16	15,681.82	921,064.94
48.76	1,283.90	2,290.56	96.05	739.57	835.62	94,040.92
121.46	6,573.36	14,297.88	308.73	3,553.66	3,862.39	384,357.58
....	....	2,020.26	....	461.15	461.15	483,012.96
32.08	5,945.85	12,755.36	394.85	5,909.82	6,304.67	373,065.44
....	1,896.84	1,909.80	....	....	....	309,626.97
....	10,667.71	23,373.36	1,106.54	14,664.18	15,770.72	987,040.66
872.57	14,379.92	20,663.01	931.76	11,357.74	12,289.50	931,120.05
39.20	5,146.71	8,712.01	94.94	28,902.03	28,996.97	430,609.32
....	2,006.19	3,571.17	....	3,042.88	3,042.88	84,111.05
217.45	5,854.37	19,602.49	376.03	7,835.00	8,211.03	1,642,663.25
579.83	2,570.64	11,093.64	878.42	14,401.27	15,279.69	2,424,098.70
688.00	27,990.34	43,891.34	705.00	13,125.00	13,830.00	2,375,407.85
....	3,500.00	5,389.74	65.23	15,000.00	15,065.23	76,121.61
6,875.34	839,811.61	1,196,075.76	12,008.78	357,867.51	369,876.29	32,936,464.25
1,914.40	....	....	3,303.49	84,991.31	88,294.80	1,045,368.48
....	17,130.04	16,900.17	....	....	....	....
189	4,909	10,838	304	5,888	6,192	498,035
58	858	1,833	53	1,001	1,054	75,953
2	110	229	1	169	170	12,971
249	5,877	12,900	358	7,058	7,416	586,959

STATEMENT "C"

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Acton..........	1,916	134	80 c.p. *s*	9.00	1,971.81	1.03
		5	80 c.p. *s*	12.00		
		2	400 c.p. *s*	18.00		
		8	60 watt *m*	4.00		
		61	100 watt *m*	9.00		
		1	150 watt *m*	12.00		
		1	200 watt *m*	18.50		
		4	300 watt *m*	20.00		
Agincourt......	....	62	100 watt *m*	12.00	744.00	**
Ailsa Craig.....	472	63	100 watt *m*	10.00	668.00	1.42
		3	100 watt (8 mos) *m*	10.00		
		1	200 watt *m*	18.00		
Alexandria......	1,919	137	100 watt *m*	14.00	1,936.00	1.01
		1	200 watt *m*	24.00		
Alliston........	1,340	101	150 c.p. *s*	17.50	1,977.50	1.48
		12	100 watt *m*	17.50		
Alvinston.......	650	84	100 watt *m*	20.00	1,854.00	2.85
		6	200 watt *m*	29.00		
Amherstburg....	2,869	65	100 c.p. *s*	13.00	2,350.10	††
		17	250 c.p. *s*	28.00		
		30	200 watt *m*	18.00		
		15	300 watt *m*	28.00		
Ancaster Twp...	....	32	100 watt *m*	11.50	1,054.00	**
		49	150 watt *m*	14.00		
Apple Hill......	....	33	100 watt *m*	14.50	478.48	**
Arkona.........	406	48	100 watt *m*	20.00	1,072.00	2.64
		4	150 watt *m*	28.00		
Arthur.........	1,035	90	100 c.p. *s*	16.50	1,485.00	1.43
Athens.........	691	40	100 watt *m*	12.00	1,055.00	1.53
		23	200 watt *m*	25.00		
Aylmer.........	1,998	187	100 watt *m*	10.00	2,525.83	1.26
		1	100 watt (7 mos.) *m*	10.00		
		25	300 watt *m*	25.00		
		1	Traffic signal *m*	40.00		

NOTE: The "Cost to municipality in 1938" represents the charges billed to the municipality by the utility for street lighting service in the calendar year. This total charge differs in some cases from the total computed for the installation at the rates shown, for the following reasons:—FIRST: Certain equipment may have been in service for less than twelve months. SECOND: More equipment than shown for December 31 may have been in service earlier in the year.

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Ayr	755	92	100 watt *m*	10.00	1,028.00	1.36
		3	500 watt *m*	36.00		
Baden	....	79	100 watt *m*	9.00	711.00	**
Barrie	8,135	476	150 c.p. *s*	9.00	6,153.12	0.76
		15	100 watt *m*	17.00		
		49	200 watt *m*	22.00		
		8	200 watt *m*	18.00		
		3	(Dock) 200 watt (6 mos.) *m*	15.00		
		13	300 watt *m*	25.00		
		1	(Monument) 500 watt *m*	30.00		
Bath	346	21	100 watt *m*	25.00	525.00	1.52
Beachville	....	47	100 watt *m*	11.00	517.00	**
Beamsville	1,121	52	80 c.p. *s*	8.00	1,896.77	1.69
		5	60 watt *m*	8.00		
		40	100 watt *m*	12.00		
		54	200 watt *m*	18.00		
Beaverton	949	107	100 watt *m*	10.00	1,326.98	1.40
		11	100 watt (6 mos.) *m*	7.00		
		6	500 watt *m*	30.00		
Beeton	555	65	150 c.p. *s*	16.00	1,264.00	2.28
		14	100 watt *m*	16.00		
Belle River	810	78	100 watt *m*	12.00	994.50	1.23
			Decorative lights *m*	50c. per 100 watts per month		
Belleville	14,560	566	100 c.p. *s*	7.00	9,607.71	0.66
		19	250 c.p. *s*	15.00		
		52	1,000 c.p. *s*	30.00		
		3	200 watt *m*	15.00		
		189	300 watt *m*	20.00		
Blenheim	1,775	165	150 c.p. *s*	12.00	2,535.00	1.43
		3	400 c.p. *s*	28.00		
		12	600 c.p. *s*	37.00		
		1	Traffic light *m*	16.00		
		1	500 watt (4 mos.) *m*	33.00		
Bloomfield	666	60	100 c.p. *s*	11.00	660.00	0.99
Blyth	652	90	100 watt *m*	13.00	1,580.00	2.42
		20	200 watt *m*	20.50		
Bolton	567	48	100 watt *m*	12.00	1,063.52	1.88
		23	200 watt *m*	21.50		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Bothwell	643	69	100 watt *m*	11.00	1,318.65	2.05
		21	300 watt *m*	27.00		
Bowmanville	3,850	181	100 c.p. *s*	10.00	3,268.31	0.85
		19	300 watt *m*	30.00		
		28	500 watt *m*	53.00		
Bradford	988	60	150 c.p. *s*	16.00	1,072.00	1.09
		7	100 watt *m*	16.00		
Brampton	5,638	676	100 watt *m*	8.00	5,667.08	1.01
		2	500 watt *m*	35.00		
		46	500 watt (3 mos.) *m*	38.50		
Brantford	31,282	149	1,500 c.p. *s*	45.00	33,466.45	††
		3,453	100 watt *m*	7.50		
		8	250 watt *m*	10.00		
		2	300 watt *m*	16.00		
		18	750 watt *m*	37.00		
		4	750 watt *m*	46.00		
Brantford Twp.	....	373	100 watt *m*	11.00	4,103.00	**
Brechin	‡	33	100 watt *m*	14.00	468.70	**
Bridgeport	....	57	100 watt *m*	11.00	723.00	**
		12	100 watt (bridge) *m*	8.00		
Brigden	....	46	60 watt *m*	11.00	800.00	**
		21	100 watt *m*	14.00		
Brighton	1,366	137	100 c.p. *s*	15.00	2,055.00	1.50
Brockville	9,983	643	100 c.p. *s*	10.00	8,764.00	0.88
		10	200 watt orn. *m*	19.00		
		35	3 lt. stands. *m*	21.00		
		51	5 lt. stands. *m*	24.00		
		13	300 watt *m*	20.00		
Brussels	780	81	100 watt *m*	12.00	1,296.00	1.66
		18	200 watt *m*	18.00		
Burford	....	67	100 watt *m*	10.00	670.08	**
Burgessville	....	24	100 watt *m*	13.00	312.00	**
Caledonia	1,410	147	100 watt *m*	9.00	1,796.75	1.27
		20	100 watt (bridge) *m*	9.50		
		9	100 watt (twp.) *m*	13.00		
		2	200 watt *m*	14.00		
		11	300 watt *m*	21.00		
Campbellville	....	20	100 watt *m*	24.00	480.00	**

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‡Includes Mara and Thorah townships.

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Cannington	764	64	100 watt *m*	15.00	1,122.98	1.47
		1	200 watt *m*	18.50		
		3	300 watt *m*	22.00		
		3	500 watt *m*	32.00		
Capreol	1,730	90	100 watt *m*	17.00	1,530.00	0.88
Cardinal	1,529	48	100 watt *m*	15.00	962.00	0.63
		12	200 watt *m*	21.00		
Carleton Place	4,278	84	60 watt *m*	13.00	4,814.54	1.13
		102	200 watt *m*	20.00		
		68	300 watt *m*	25.00		
Cayuga	664	82	100 watt *m*	18.00	1,474.50	2.22
		1	150 watt *m*	20.00		
Chatham	16,153	720	150 c.p. *s*	13.00	19,240.76	††
		19	250 c.p. *s*	16.00		
		42	600 c.p. *s*	31.00		
		35	150 c.p. orn. *s*	12.00		
		75	600 c.p. orn. *s*	30.00		
		137	1,000 c.p. orn. *s*	38.00		
		2	250 watt (floodlights) *m*	24.00		
Chatsworth	321	41	100 watt *m*	15.00	615.00	1.92
Chesley	1,815	122	150 c.p. *s*	12.00	1,457.00	0.80
Chesterville	1,068	86	100 watt *m*	12.00	1,059.16	0.99
			Decorative lights *m*	27.16		
Chippawa	1,186	92	100 watt *m*	13.00	1,702.42	1.44
		19	200 watt *m*	25.00		
Clifford	446	56	100 watt *m*	13.00	901.31	2.02
		10	200 watt *m*	20.00		
Clinton	1,901	146	150 c.p. *s*	11.00	2,674.96	1.41
		8	100 watt *m*	11.00		
		29	300 watt *m*	31.00		
		1	500 watt *m*	55.00		
Cobden	621	38	100 watt *m*	15.00	852.00	1.37
		12	150 watt *m*	23.50		
Cobourg	5,125	175	100 c.p. *s*	12.00	5,768.56	1.13
		229	100 watt *m*	12.00		
		4	250 watt *m*	23.00		
		19	500 watt *m*	47.50		
Colborne	964	120	60 c.p. *s*	12.00	1,471.00	1.53
		5	100 watt *m*	12.00		
Coldwater	589	50	100 watt *m*	11.00	873.00	1.48
		19	200 watt *m*	17.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Collingwood....	5,478	423	150 c.p. *s*	9.00	3,807.00	0.69
Comber........	....	56	100 watt *m*	12.00	672.00	**
Cookstown.....	....	57	150 c.p. *s*	15.00	840.00	**
Cottam........	....	32	100 watt *m*	15.00	480.00	**
Courtright......	334	43	100 watt *m*	18.00	774.00	2.32
Creemore.......	632	62	100 watt *m*	12.00	726.00	1.15
Dashwood......	....	41	100 watt *m*	11.00	451.00	**
Delaware.......	....	22	100 watt *m*	12.00	264.00	**
Delhi..........	1,677	176	100 watt *m*	12.00	1,228.75	0.73
Deseronto......	1,300	137	100 c.p. *s*	10.00	1,339.92	1.03
Dorchester.....	....	72	100 watt *m*	10.00	714.84	**
Drayton........	551	80	100 watt *m*	12.00	960.00	1.74
Dresden........	1,477	109 20 12 15	100 c.p. *s* 400 c.p. *s* 100 watt (bridge) *m* 50 watt (arch) *m*	13.00 21.50 12.00 4.56	1,979.86	1.34
Drumbo........	....	39 1	100 watt *m* 100 watt (6 mos.) *m*	13.00 13.00	513.50	**
Dublin.........	....	50	100 watt *m*	13.00	650.00	**
Dundalk.......	666	82	100 watt *m*	15.00	1,230.00	1.85
Dundas........	4,956	291 12 54 6 20	100 watt *m* 200 watt *m* 200 watt *m* 200 watt orn. *m* 100 watt *m* Memorial square	12.00 16.00 32.00 26.00 Free	5,557.00	††
Dunnville......	4,004	257 27	150 c.p. *s* 1,000 c.p. *s*	10.50 40.00	3,712.89	0.93
Durham........	1,852	106 6	150 c.p. *s* 400 c.p. *s*	16.00 24.00	1,840.00	0.99
Dutton.........	807	114	100 watt *m*	9.00	1,024.44	1.27
East York Twp..	....	1 1,074 4 2 244 15	60 watt *m* 100 watt *m* 200 watt *m* 250 watt *m* 300 watt *m* 500 watt *m*	7.80 13.00 19.50 22.75 26.00 29.00	19,924.57	**

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.
††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Elmira.........	2,069	191	100 watt *m*	9.00	1,843.00	0.89
		8	200 watt *m*	12.00		
		1	500 watt *m*	28.00		
Elmvale........	....	60	100 watt *m*	12.00	718.00	**
Elmwood.......	....	23	150 watt *m*	21.00	475.19	**
Elora..........	1,149	82	100 watt *m*	13.00	1,651.60	1.44
		27	200 watt *m*	19.00		
Embro.........	428	56	100 watt *m*	12.00	669.00	1.56
Erieau.........	273	24	100 watt *m*	18.00	432.00	1.58
Essex..........	1,833	133	60 watt *m*	7.50	2,115.35	††
		15	100 watt *m*	10.00		
		3	200 watt *m*	14.00		
		48	300 watt orn. *m*	18.00		
		1	500 watt orn. *m*	28.00		
		13	Empty sockets orn. *m*	1.50		
		6	Empty sockets *m*	4.50		
Etobicoke Twp..	....	1,051	100 watt *m*	13.50	14,318.74	**
		22	100 watt *m*	18.00		
		2	250 watt *m*	16.00		
		2	25 watt *m*	13.50 per 100 watts		
Exeter.........	1,652	3	100 watt (Park) *m*	8.50	2,734.50	1.66
		174	100 watt *m*	9.50		
		32	300 watt *m*	33.00		
Fergus.........	2,785	155	100 watt *m*	12.00	2,578.62	0.93
		20	150 watt *m*	14.50		
		22	300 watt orn. *m*	27.50		
		4	Traffic lights *m*	18.00		
Finch..........	371	38	100 watt *m*	12.00	456.00	1.23
Flesherton......	447	53	100 watt *m*	11.00	609.00	1.36
		1	300 watt *m*	26.00		
Fonthill........	829	69	100 watt *m*	15.00	1,163.00	1.40
		12	300 watt *m*	27.00		
Forest.........	1,502	102	60 watt *m*	7.00	2,385.50	1.59
		147	100 watt *m*	11.00		
		3	100 watt *m* (Station platform)	18.00		
Forest Hill......	10,208	518	100 watt *m*	12.00	6,218.45	0.61
		3	300 watt *m*	27.00		
		6	300 watt *m*	38.00		
		5	400 watt *m*	61.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Fort William....	24,020	374	100 c.p. *s*	8.00	18,872.14	0.79
		58	400 c.p. *s*	18.00		
		78	600 c.p. *s*	28.00		
		229	1,000 c.p. *s*	38.00		
		187	100 watt *m*	8.00		
		114	300 watt *m*	23.00		
Galt...........	14,410	979	100 c.p. *s*	9.00	16,283.92	1.13
		294	100 watt *m*	6.50		
		100	100 watt *m*	8.00		
		26	100 watt *m*	9.00		
		22	100 watt *m*	16.00		
		18	150 watt (bridge) *m*	8.50		
		33	150 watt *m*	9.00		
		40	150 watt *m*	18.00		
		31	150 watt *m*	21.00		
		4	300 watt *m*	16.50		
		80	300 watt *m*	17.00		
		12	300 watt *m*	26.00		
Georgetown‡....	2,325	157	100 watt *m*	11.00	2,669.02	......
		1	300 watt (floodlight) *m*	19.00		
		21	300 watt *m*	30.00		
Glencoe........	810	113	100 watt *m*	14.00	1,962.00	2.42
		19	200 watt *m*	20.00		
Goderich.......	4,488	327	100 c.p. *s*	9.00	4,521.50	1.01
		3	100 c.p. (6 mos.) *s*	9.00		
		8	100 watt *m*	15.00		
		7	400 watt *m*	35.00		
		4	250 watt *m*	18.00		
		8	500 watt *m*	37.00		
		16	600 watt *m*	52.00		
Grand Valley...	600	39	100 watt *m*	12.00	884.00	1.47
		13	300 watt *m*	32.00		
Granton........	....	37	100 watt *m*	10.00	370.00	**
Gravenhurst....	2,052	134	100 c.p. *s*	10.00	2,092.98	1.02
		22	50 watt *m*	7.50		
		10	50 watt (6 mos.) *m*	4.00		
		2	100 watt *m*	10.00		
		8	100 watt (6 mos.) *m*	6.00		
		16	300 watt *m*	30.00		
Guelph.........	21,333	10	50 watt *m*	4.00	18,786.56	0.88
		6	60 watt *m*	4.00		
		1,382	100 watt *m*	10.00		
		172	200 watt *m*	12.50		
		43	300 watt *m*	18.75		
		9	500 watt *m*	25.00		
		53	500 watt (220V.) *m*	34.00		
Hagersville.....	1,307	115	100 watt *m*	14.00	2,050.00	1.57
		20	300 watt *m*	22.00		

**Population not shown in Government statistics. SSeries system. *m*Multiple system.
‡Includes Glen Williams.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Hamilton.......	153,527	6	40 watt *m*	4.50	123,718.67	0.81
		96	50 watt *m*	6.00		
		8,280	100 watt *m*	7.50		
		1,170	200 watt *m*	11.00		
		5	300 watt *m*	18.00		
		28	300 watt *m*	26.00		
		77	300 watt *m*	32.00		
		27	300 watt *m*	34.00		
		480	500 watt *m*	32.00		
		599	500 watt *m*	37.00		
		65	750 watt *m*	55.00		
		2	1,000 watt *m*	70.00		
		3	Danger signals *m*	28.00		
		2	1,200 watt stands. *m*	70.00		
Hanover.......	3,191	97	150 c.p. *s*	22.00	2,988.00	0.94
		29	300 c.p. *s*	27.00		
		4	100 watt *m*	22.00		
		13	200 watt *m*	27.00		
			Decorative lighting *m*	5.71 per month		
Harriston.......	1,266	79	150 c.p. *s*	12.00	1,606.50	1.27
		4	100 watt *m*	12.00		
		13	150 watt *m*	13.50		
		29	200 watt *m*	15.00		
Harrow........	984	1	100 watt *m*	12.00	1,332.00	1.35
		80	200 watt *m*	16.50		
Hastings.......	762	64	100 watt *m*	16.00	1,271.39	1.67
		8	200 watt *m*	20.00		
			Decorative lights	87.39		
Havelock.......	1,164	63	100 c.p. *s*	13.00	1,497.00	1.29
		23	250 c.p. *s*	24.00		
Hensall........	680	84	100 watt *m*	12.00	1,008.00	1.48
Hespeler.......	2,810	91	150 c.p. *s*	12.00	3,112.33	1.11
		35	250 c.p. *s*	16.00		
		15	400 c.p. stands *s*	30.00		
		51	150 watt *m*	11.00		
		10	300 watt *m*	21.50		
		7	300 watt stands—Park *m*	35.00		
Highgate.......	349	40	100 watt *m*	11.00	567.00	1.62
		6	200 watt *m*	17.00		
		1	300 watt *m*	25.00		
Holstein.......	....	15	100 watt *m*	25.00	350.00	**
Humberstone...	2,629	107	100 watt *m*	12.50	1,617.50	0.62
		16	200 watt *m*	17.50		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Huntsville......	2,707	4	100 c.p. *s*	12.00	2,780.00	1.03
		52	150 c.p. *s*	16.00		
		10	250 c.p. *s*	20.00		
		68	75 watt *m*	10.00		
		34	500 watt *m*	30.00		
Ingersoll.......	5,177	334	100 c.p. *s*	10.00	4,727.36	††
		2	600 c.p. *s*	28.00		
		26	1,000 c.p. *s*	35.00		
		2	1,000 c.p. (church) *s*	25.00		
		13	100 c.p. (6 mos.) *s*	5.50		
		12	300 watt *m*	30.00		
Jarvis..........	505	78	100 watt *m*	11.00	858.00	1.70
Kemptville.....	1,204	77	100 watt *m*	18.00	1,768.00	1.47
		17	150 watt *m*	21.00		
		1	250 watt *m*	25.00		
Kincardine.....	2,458	158	150 c.p. *s*	20.00	4,627.50	1.88
		5	100 watt (6 mos.) *m*	15.00		
		30	100 watt *m*	15.00		
		37	200 watt *m*	25.00		
		1	1,000 watt *m*	85.00		
Kingston.......	24,331	105	100 c.p. *s*	12.00	22,456.17	0.92
		1	250 c.p. *s*	25.00		
		266	600 c.p. *s*	35.00		
		258	600 c.p. *s*	46.00		
Kingsville......	2,363	112	150 c.p. *s*	10.50	2,852.99	††
		25	250 c.p. *s*	15.00		
		125	100 watt *m*	10.50		
Kirkfield.......	....	24	100 watt *m*	20.00	480.00	**
Kitchener......	32,550	2,070	80 c.p. *s*	9.00	33,584.06	††
		160	250 c.p. *s*	13.00		
		18	1,000 c.p. *s*	25.00		
		47	16 c.p. Fire alarms	7.00		
		212	100 watt *m*	9.00		
		458	200 watt *m*	15.00		
		58	300 watt *m*	17.50		
		109	500 watt *m*	25.00		
Lakefield.......	1,332	113	100 watt *m*	15.00	1,732.44	1.30
Lambeth.......	....	11	100 watt *m*	11.00	734.22	**
		20	300 watt *m*	31.00		
Lanark.........	702	39	100 watt *m*	15.00	585.00	0.83
Lancaster......	588	41	100 watt *m*	20.00	850.00	1.45
		1	200 watt *m*	30.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
					$ c.	$ c.	$ c.
La Salle	812	67	100 watt (9 mos.)	m	12.00	630.08	0.78
		65	Empty sockets (3 mos.)	m	5.00		
Leamington	5,446	176	250 c.p.	s	15.00	5,440.42	††
		3	400 c.p.	s	19.00		
		184	100 watt	m	14.00		
		1	200 watt	m	18.00		
Lindsay	7,294	420	100 c.p.	s	11.50	6,439.44	0.88
		25	1,000 c.p.	s	60.00		
		2	1,000 c.p.(cenotaph)	s	60.00		
Listowel	2,826	310	100 watt	m	11.00	4,513.71	††
		8	200 watt	m	25.00		
		30	500 watt	m	35.00		
London	74,281	8	150 c.p.	s	10.00	55,505.78	††
		1,546	150 c.p.	s	11.00		
		116	400 c.p.	s	18.00		
		236	400 c.p.	s	24.00		
		33	600 c.p.	s	28.00		
		169	600 c.p.	s	30.00		
		2	50 watt	m	5.00		
		528	100 watt	m	10.00		
		6	100 watt	m	11.00		
		43	100 watt	m	14.00		
		4	150 watt	m	12.00		
		12	200 watt	m	9.34		
		64	200 watt	m	14.00		
		607	300 watt	m	18.00		
		40	300 watt	m	20.00		
		126	500 watt	m	35.00		
		46	500 watt	m	40.00		
London Twp.	....	63	100 watt	m	12.00	1,125.85	**
		6	100 watt (4 mos.)	m	21.50		
		1	200 watt	m	16.50		
		10	300 watt	m	30.00		
		1	300 watt (4 mos.)	m	31.00		
Long Branch	4,029	197	100 watt	m	13.00	4,415.09	1.10
		113	200 watt	m	17.50		
Lucan	614	70	100 watt	m	14.00	979.98	1.60
Lucknow	1,036	63	100 watt	m	21.00	1,850.00	1.79
		17	200 watt	m	31.00		
Lynden	....	44	100 watt	m	10.00	440.00	**
Madoc	1,210	400	25 watt	m	3.00	1,500.00	1.24
		63	100 watt	m	5.00		
Markdale	781	90	150 c.p.	s	10.00	905.50	1.16

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Markham......	1,116	119	100 watt *m*	12.00	1,428.00	1.28
Marmora.......	1,014	44	75 watt *m*	13.00	1,298.00	1.28
		24	100 watt *m*	16.00		
		19	150 watt *m*	18.00		
Martintown....	....	15	100 watt *m*	13.00	195.00	**
Maxville.......	758	66	150 c.p. *s*	18.00	1,188.00	1.57
Meaford........	2,719	188	150 c.p. *s*	11.00	3,008.95	1.11
		28	100 watt *m*	11.00		
		35	200 watt *m*	19.00		
Merlin.........	....	46	100 watt *m*	15.00	691.01	**
		1	Decorative string	51c. per 100 watts per month		
Merritton......	2,644	310	100 watt *m*	9.00	3,336.00	1.26
		26	200 watt *m*	21.00		
Midland........	6,669	328	150 c.p. *s*	11.00	6,376.00	0.96
		52	100 watt *m*	11.00		
		8	‡300 watt (6 mos.) *m*	12.00		
		30	300 watt *m*	22.00		
		36	500 watt *m*	40.00		
Mildmay.......	746	46	100 watt *m*	10.00	666.00	0.89
		11	150 watt *m*	16.00		
Milton.........	1,791	125	100 watt *m*	9.50	1,937.52	1.08
		25	300 watt *m*	30.00		
Milverton......	1,006	99	100 watt *m*	9.00	1,033.50	1.03
		12	200 watt *m*	12.00		
Mimico........	6,940	325	100 watt *m*	12.00	7,604.21	1.10
		81	200 watt *m*	20.00		
		89	300 watt *m*	26.00		
Mitchell........	1,607	196	150 c.p. *s*	9.00	2,547.00	1.58
		27	300 watt *m*	29.00		
Moorefield......	....	25	100 watt *m*	14.00	350.00	**
Mount Brydges .	....	47	100 watt *m*	10.00	672.23	**
		1	200 watt *m*	17.00		
		17	200 watt orn. *m*	21.00		
Mount Forest...	1,946	120	150 c.p. *s*	10.00	2,161.00	1.11
		37	100 watt *m*	10.00		
		39	150 watt *m*	13.00		
		3	300 watt *m*	28.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.
‡Dock Lights owned by Dominion Government.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Napanee.......	3,018	155	100 watt *m*	12.00	4,215.00	1.40
		2	250 watt *m*	28.00		
		2	250 watt *m*	30.00		
		40	300 watt *m*	34.00		
		5	300 watt stands. *m*	27.00		
		21	400 watt clusters *m*	36.00		
Neustadt.......	441	39	150 c.p. *s*	20.00	780.00	1.77
Newbury.......	279	47	100 watt *m*	15.00	705.00	2.53
Newcastle......	690	51	60 watt *m*	14.00	738.68	1.07
		2	100 watt *m*	17.00		
New Hamburg..	1,441	165	100 watt *m*	9.00	2,217.00	1.54
		61	200 watt *m*	12.00		
New Toronto...	7,095	114	75 watt *m*	13.00	7,446.51	1.05
		8	150 watt *m*	15.50		
		16	200 watt *m*	17.00		
		126	300 watt *m*	24.00		
		14	300 watt *m*	22.00		
		101	300 watt *m*	21.00		
		3	1,000 watt (floodlight) *m*	52.00		
Niagara Falls...	18,747	838	100 c.p. *s*	11.00	27,492.57	1.47
		13	250 c.p. *s*	13.00		
		63	600 c.p. *s*	18.00		
		235	600 c.p. orn. *s*	37.00		
		196	1,000 c.p. orn. *s*	42.00		
		1	100 watt *m*	11.00		
Niagara-on-the-Lake	1,651	200	100 watt *m*	11.00	3,231.42	1.96
		13	200 watt *m*	18.00		
		49	300 watt *m*	20.00		
Nipigon........	....	31	100 watt *m*	13.00	649.00	**
		9	200 watt *m*	24.00		
North York Twp.........	....	81	100 watt *m*	12.00	3,974.06	**
		20	100 watt *m*	13.00		
		32	100 watt *m*	13.50		
		12	100 watt *m*	15.00		
		2	100 watt *m*	15.50		
		10	100 watt *m*	16.50		
		1	100 watt *m*	17.70		
		1	100 watt *m*	18.00		
		65	200 watt *m*	23.00		
		1	400 watt (floodlight) *m*	31.00		
		1	400 watt (mercury) *m*	43.00		
		2	1,000 watt (floodlight) *m*	65.00		
		1	100 watt (Police sign) *m*	12.00		
		1	Traffic light *m*	8.00		
		1	Traffic light *m*	30.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Norwich	1,212	113	100 watt *m*	10.00	2,105.00	1.74
		28	400 watt *m*	35.00		
Norwood	716	77	100 c.p. *s*	18.00	1,581.00	2.21
		10	250 c.p. *s*	21.00		
Oil Springs	470	41	100 watt *m*	18.00	768.00	1.63
		1	300 watt (6 mos.) *m*	30.00		
Omemee	598	49	100 c.p. *s*	14.00	1,013.70	1.70
		10	100 watt *m*	12.50		
		10	250 watt *m*	28.00		
Orangeville	2,479	98	150 c.p. *s*	11.00	2,979.48	1.20
		50	250 c.p. *s*	17.00		
		38	300 watt *m*	24.00		
Oshawa	24,844	857	100 c.p. *s*	11.00	12,040.66	0.48
		51	100 watt *m*	12.00		
		112	150 watt *m*	13.00		
		30	200 watt *m*	18.00		
		1	500 watt *m*	27.00		
Ottawa	142,852	352	100 c.p. *s*	7.00	78,283.99	0.55
		865	400 c.p. *s*	25.00		
		885	600 c.p. *s*	35.00		
		59	Arcs *s*	45.00		
		771	100 watt *m* (Driveway) *m*	6.00		
		2,940	100 watt (White way)	48c. per foot		
Otterville	....	57	100 watt *m*	11.00	844.18	**
		13	200 watt *m*	16.00		
Owen Sound	13,118	447	150 c.p. *s*	13.00	13,476.58	1.03
		339	400 c.p. *s*	16.00		
		14	600 c.p. *s*	23.00		
		46	1,000 c.p. *s*	37.00		
Paisley	773	90	100 watt *m*	14.00	1,260.00	1.63
Palmerston	1,410	66	80 c.p. *s*	9.00	2,628.00	1.86
		1	400 c.p. *s*	25.00		
		11	60 watt *m*	9.00		
		25	100 watt *m*	10.00		
		9	150 watt *m*	10.00		
		4	250 watt *m*	25.00		
		19	300 watt *m*	25.00		
		1	500 watt *m*	35.00		
		32	300 watt stands *m*	30.00		
Paris	4,325	477	100 c.p. *s*	8.50	5,586.50	1.29
		10	400 watt *m*	28.00		
		34	500 watt *m*	35.00		
		2	60 watt *m*	7.00		
			Decorative lights *m*	50.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Parkhill........	997	88	100 watt *m*	14.00	1,577.04	1.58
		15	200 watt *m*	23.00		
Penetanguishene	4,177	191	150 c.p. *s*	11.00	2,226.00	0.53
		3	200 watt *m*	15.00		
		4	300 watt *m*	20.00		
Perth..........	4,183	82	100 c.p. *s*	17.00	2,569.50	0.61
		14	250 c.p. *s*	27.00		
		7	400 c.p. *s*	30.00		
		19	600 c.p. *s*	45.00		
Peterborough...	23,450	122	60 watt *m*	12.00	22,246.84	0.95
		373	100 watt *m*	13.00		
		607	300 watt *m*	20.00		
		85	300 watt orn. *m*	45.00		
Petrolia........	2,711	151	150 c.p. *s*	12.00	2,822.00	1.04
		24	600 c.p. *s*	43.00		
Picton.........	3,410	321	100 c.p. *s*	9.00	3,858.60	1.13
		43	250 c.p. *s*	15.00		
Plattsville......	....	34	100 watt *m*	12.00	408.00	**
Point Edward...	1,161	100	150 c.p. *s*	13.00	1,599.96	1.38
		15	250 c.p. *s*	20.00		
Port Arthur.....	20,302	2,709	100 watt *m*	5.00	19,602.26	0.97
		232	300 watt *m*	10.00		
		208	500 watt *m*	15.00		
Port Colborne...	6,348	15	400 c.p. *s*	25.00	8,282.98	††
		78	600 c.p. *s*	30.00		
		227	100 watt *m*	12.00		
		34	100 watt (9 mos.) *m*	14.00		
		34	100 watt (3 mos.) *m*	12.00		
		132	200 watt *m*	18.00		
Port Credit.....	1,751	275	100 watt *m*	10.00	2,750.00	1.57
Port Dalhousie..	1,565	129	100 watt *m*	12.00	1,578.00	1.01
		2	200 watt *m*	15.00		
Port Dover.....	1,640	201	100 watt *m*	10.00	2,682.12	1.64
		15	300 watt *m*	18.00		
		34	100 watt *m* (Summer)	6.00		
		4	300 watt *m* (Summer)	10.00		
		236	25 watt *m* (Decorative)	67c. per 100 watts per month		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps		Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
					$ c.	$ c.	$ c.
Port Elgin......	1,293	114	100 watt (6 mos.)	*m*	14.00	2,518.04	1.95
		120	100 watt (2 mos.)	*m*	14.00		
		175	100 watt (2 mos.)	*m*	14.00		
		194	100 watt (2 mos.)	*m*	14.00		
		26	200 watt	*m*	22.00		
Port Hope......	4,577	398	100 c.p.	*s*	10.00	3,988.07	0.87
Port McNicoll...	911	64	100 watt	*m*	10.00	964.00	1.06
		18	200 watt	*m*	18.00		
Port Perry......	1,118	94	100 watt	*m*	15.00	1,433.75	1.28
		10	300 watt	*m*	30.00		
Port Rowan....	659	55	100 watt	*m*	15.00	825.00	1.25
Port Stanley....	741	217	100 watt	*m*	11.00	2,387.08	3.22
Prescott........	2,850	215	100 watt	*m*	10.00	3,646.00	1.28
		88	200 watt	*m*	17.00		
Preston........	6,415	135	150 c.p.	*s*	11.00	5,519.08	0.86
		215	100 watt	*m*	11.00		
		9	250 watt	*m*	20.00		
		40	500 watt	*m*	32.00		
		6	500 watt stands	*m*	35.00		
Priceville.......	....	14	100 watt	*m*	40.00	560.00	**
Princeton.......	....	39	100 watt	*m*	12.00	468.00	**
Queenston......	....	19	100 watt	*m*	16.00	304.32	**
Richmond......	419	26	100 watt	*m*	16.00	416.00	0.99
Richmond Hill..	1,241	100	75 watt	*m*	11.00	1,472.00	1.19
		19	100 watt	*m*	12.00		
		9	200 watt	*m*	16.00		
Ridgetown......	1,956	177	150 c.p.	*s*	8.50	3,142.94	††
		1	1,000 c.p.	*s*	38.00		
		87	100 watt	*m*	8.50		
		17	200 watt	*m*	16.00		
		2	200 watt orn.	*m*	16.00		
		2	250 watt	*m*	18.00		
		20	500 watt	*m*	33.00		
Ripley.........	432	43	100 watt	*m*	20.00	1,070.00	2.48
		6	200 watt	*m*	35.00		
Riverside.......	5,090	282	75 watt	*m*	9.00	3,302.54	††
		74	150 watt	*m*	13.00		
Rockwood......	....	87	100 watt	*m*	9.00	783.00	**
Rodney........	722	69	100 watt	*m*	10.00	1,233.00	1.71
		23	300 watt	*m*	30.00		

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Rosseau........	300	47	100 watt *m*	30.00	1,102.50	3.68
Russell.........	....	47	100 watt *m*	16.00	752.00	**
St. Catharines...	27,426	2,330	100 watt *m*	8.00	26,553.75	††
		19	100 watt orn. *m*	10.00		
		153	200 watt *m*	11.00		
		72	200 watt orn. *m*	20.00		
		4	300 watt orn. *m*	30.00		
		5	500 watt *m*	20.00		
		102	500 watt orn *m*	34.00		
		17	500 watt (bridge) *m*	20.00		
		11	1,000 watt *m*	40.00		
St. George......	....	39	100 watt *m*	10.00	428.00	**
		1	750 watt *m*	38.00		
St. Jacobs......	....	46	100 watt *m*	10.00	460.00	**
St. Marys......	4,017	235	100 c.p. *s*	11.00	4,992.75	1.24
		106	250 c.p. *s*	14.00		
		19	150 watt *m*	12.00		
		32	300 watt *m*	22.00		
St. Thomas.....	16,208	1,101	100 c.p. *s*	9.00	14,834.16	††
		28	250 c.p. *s*	13.00		
		1	600 c.p. *s*	32.00		
		114	600 c.p. *s*	34.00		
		6	60 watt (5 mos.) *m*	3.00		
		6	60 watt *m*	4.50		
		26	100 watt (5 mos.) *m*	5.00		
		2	100 watt *m*	10.00		
		3	200 watt (5 mos.) *m*	10.00		
		22	300 watt *m*	22.00		
Sarnia.........	18,155	1,062	150 c.p. *s*	12.00	19,217.96	††
		54	250 c.p. *s*	16.50		
		72	400 c.p. *s*	22.00		
		77	600 c.p. *s*	35.00		
		14	600 c.p. *s*	45.00		
		7	100 watt *m*	12.00		
		8	150 watt *m*	16.50		
		5	250 watt *m*	22.00		
		14	300 watt *m*	32.00		
Scarboro Twp...	....	207	100 c.p. *s*	12.00	15,154.61	**
		10	Empty sockets *s*	9.00		
		2	250 c.p . *s*	17.00		
		19	40 watt *m*	12.00		
		2	60 watt *m*	18.00		
		446	100 watt *m*	12.00		
		22	Empty sockets *m*	9.00		
		9	200 watt *m*	17.00		
		10	200 watt *m*	21.00		
		194	300 watt *m*	24.00		
		5	300 watt *m*	26.00		
		122	Empty sockets *m*	14.50		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Seaforth........	1,708	123	100 c.p. *s*	10.50	2,230.50	1.31
		19	300 watt *m*	25.00		
		16	300 watt orn. *m*	29.00		
Shelburne......	1,099	96	150 c.p. *s*	9.00	864.00	0.79
Simcoe.........	5,826	280	100 c.p. *s*	11.00	4,789.77	††
		9	250 c.p. *s*	15.00		
		12	400 c.p. *s*	18.00		
		27	1,000 c.p. *s*	40.00		
		9	150 watt *m*	11.00		
		8	200 watt *m*	15.00		
		6	200 watt orn. *m*	24.00		
		1	500 watt *m*	53.00		
		1	1,000 watt *m*	60.00		
Smiths Falls....	7,626	18	60 watt *m*	9.50	8,713.92	1.14
		101	100 watt *m*	18.00		
		2	200 watt *m*	25.00		
		267	300 watt *m*	25.00		
Southampton...	1,202	103	100 watt *m*	13.00	2,298.81	1.91
		52	250 watt *m*	18.00		
		39	60 watt (3 mos.) *m*	12.00		
		1	Decorative string *m*	36.00		
Springfield......	378	53	100 watt *m*	11.00	583.00	1.54
Stamford Twp..	....	866	100 watt *m*	9.00	7,765.50	**
Stayner........	1,034	80	100 c.p. *s*	12.00	1,320.00	1.28
		20	200 watt *m*	18.00		
Stirling.........	938	27	100 c.p. *s*	10.00	1,607.04	1.71
		80	150 watt *m*	10.00		
		2	300 watt *m*	24.75		
		15	500 watt *m*	32.50		
Stouffville......	1,115	127	100 watt *m*	12.00	1,524.00	1.37
Stratford.......	17,615	872	100 c.p. *s*	10.00	16,635.47	0.94
		78	600 c.p. *s*	25.00		
		116	600 c.p. *s*	30.00		
		6	600 c.p. *s*	35.00		
		63	1,000 c.p. *s*	34.00		
		4	100 watt *m*	10.00		
		4	500 watt *m*	34.00		
Strathroy.......	2,947	301	100 c.p. *s*	9.00	4,068.21	1.38
		21	250 c.p. *s*	15.00		
		17	600 watt *m*	62.00		
Streetsville.....	672	42	100 watt *m*	9.50	935.50	1.39
		28	200 watt *m*	11.50		
		13	300 watt *m*	16.50		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Sudbury........	26,315	753	100 c.p. *s*	12.00	21,183.98	0.81
		62	250 c.p. *s*	16.00		
		10	600 c.p. *s*	28.00		
		42	600 c.p. stands *s*	50.00		
		10	1,000 c.p. *s*	35.00		
		43	1,000 c.p. stands *s*	57.00		
		45	1,500 c.p. *s*	65.00		
		49	1,500 c.p. mag. *s*	65.00		
Sunderland.....	....	29	100 watt *m*	20.00	720.00	**
		4	500 watt *m*	38.00		
Sutton.........	852	119	100 watt *m*	13.00	2,047.30	2.40
		25	200 watt *m*	17.00		
		38	Decorative strings (3 mos.) *m*	13.00		
Swansea........	5,831	207	100 watt *m*	12.00	3,599.04	0.62
		59	200 watt *m*	19.00		
Tara...........	472	51	100 watt *m*	13.00	1,301.00	2.76
		16	300 watt *m*	34.00		
Tavistock......	1,037	83	100 watt *m*	10.00	1,317.96	1.27
		39	200 watt *m*	12.00		
Tecumseh......	2,245	18	400 c.p. *s*	24.00	1,366.35	††
		67	100 watt *m*	14.00		
Teeswater......	838	42	150 c.p. *s*	15.00	1,294.00	1.54
		20	300 c.p. *s*	29.00		
		80	25 watt (7 mos.) *m*	60c. per 100 watts per month		
Thamesford.....	....	48	100 watt *m*	11.00	528.00	**
Thamesville....	814	69	100 watt *m*	9.00	1,235.37	1.52
		33	200 watt *m*	14.00		
		7	200 watt orn. *m*	18.00		
Thedford.......	593	70	100 watt *m*	15.00	1,037.50	1.75
Thorndale......	....	32	100 watt *m*	12.00	384.00	**
Thornton.......	....	22	100 watt *m*	30.00	660.00	**
Thorold........	4,904	400	75 watt *m*	7.50	3,391.54	0.69
		2	100 watt *m*	8.00		
		35	200 watt *m*	12.00		
		2	300 watt *m*	15.00		
Tilbury........	1,980	107	100 watt *m*	12.00	1,753.96	0.89
		25	200 watt *m*	20.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

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STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Tillsonburg.....	3,828	278	100 c.p. *s*	9.50	4,846.54	1.27
		1	250 c.p. *s*	13.00		
		12	300 watt *m*	32.00		
		44	500 watt *m*	42.00		
		1	Traffic light *m*	18.36		
Toronto........	648,309	46,338	100 watt *m*	8.00–10.00	512,392.10	0.79
		4,154	200 watt *m*	14.00–20.00		
		1,429	300 watt *m*	20.00–25.00		
		185	500 watt *m*	35.00–40.00		
		5	1,000 watt *m*	70.00		
		391	1-lt. stds. 300 w. *m*	40.00		
		353	1-lt. stds. 500 w. *m*	47.50		
		154	5-lt. stds. 100 w. *m*	47.50		
Toronto Twp....	....	417	100 watt *m*	12.00	5,066.95	**
		1	Intersection light *m*	43.20		
Tottenham.....	526	49	150 c.p. *s*	19.00	931.00	1.77
Trenton........	6,480	48	600 c.p. *s*	63.00	6,350.75	0.98
		312	100 watt *m*	10.50		
		1	500 watt *m*	63.00		
Tweed.........	1,256	137	100 c.p. *s*	15.00	2,061.21	1.64
		2	100 c.p. (special) *s*	20.00		
Uxbridge.......	1,527	132	100 watt *m*	12.00	1,719.00	1.13
		6	100 watt (5 mos.) *m*	8.00		
		1	200 watt *m*	16.00		
		1	200 watt (5 mos.) *m*	11.00		
		3	300 watt *m*	20.00		
Victoria Harbor	1,092	78	100 watt *m*	8.50	663.00	0.61
Walkerton......	2,358	119	150 c.p. *s*	14.00	2,840.11	1.20
		39	250 c.p. *s*	24.50		
		1	50 watt *m*	6.00		
		8	100 watt *m*	14.00		
			Decorative lights *m*	100.00		
Wallaceburg....	4,537	191	150 c.p. *s*	12.00	4,377.50	1.04
		12	400 c.p. *s*	22.00		
		56	300 watt *m*	33.00		
Wardsville......	243	36	100 watt *m*	20.00	720.00	2.96
Warkworth.....	....	40	100 watt *m*	14.00	595.00	**
		2	200 watt *m*	24.50		
Waterdown.....	885	75	100 watt *m*	10.00	886.00	1.00
		8	200 watt *m*	17.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

STATEMENT "C"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
Waterford......	1,238	157	100 watt *m*	8.00	1,488.00	1.20
		4	100 watt *m*	12.00		
		1	100 watt (9 mos.) *m*	12.00		
		10	200 watt *m*	15.00		
		1	500 watt *m*	25.00		
Waterloo.......	8,425	370	80 c.p. *s*	8.00	7,716.08	††
		120	100 c.p. *s*	10.00		
		93	150 watt *m*	10.00		
		5	200 watt *m*	12.00		
		18	300 watt *m*	21.00		
		3	500 watt *m*	30.00		
		9	500 Watt *m*	35.00		
		10	300 watt 3-lt. stds. *m*	25.00		
		44	450 watt 5-lt. stds. *m*	36.00		
Watford........	975	91	100 watt *m*	12.50	1,449.49	1.49
		11	200 watt (8 mos.) *m*	20.00		
		16	300 watt (4 mos.) *m*	31.00		
Waubaushene...	....	46	100 watt *m*	9.00	464.00	**
		10	100 watt (5 mos.) *m*	5.00		
Welland........	10,924	178	600 c.p. orn. *s*	30.00	11,053.01	††
		14	600 c.p. (Park) *s*	30.00		
		460	100 watt *m*	11.00		
		25	200 watt *m*	18.00		
		6	300 watt orn. *m*	30.00		
		4	500 watt *m*	28.00		
		6	Empty sockets *m*	18.00		
Wellesley.......	....	60	100 watt *m*	11.00	660.00	**
Wellington.....	907	88	100 c.p. *s*	12.00	1,041.00	1.15
West Lorne.....	784	88	100 watt *m*	10.00	1,039.17	1.33
		10	200 watt *m*	18.00		
Weston........	5,048	421	100 c.p. *s*	7.50	7,279.51	1.44
		15	100 c.p. *s*	9.50		
		111	600 c.p. *s*	30.00		
		20	300 watt *m*	11.00		
		5	100 watt 5-lt. stds. *m*	21.00		
		2	Municipal signs *m*	110.00		
Westport.......	710	2	50 watt *m*	10.00	1,247.06	1.76
		68	100 watt *m*	19.00		
Wheatley.......	744	64	100 watt *m*	13.00	1,472.00	1.98
		40	150 watt *m*	16.00		
Whitby........	3,706	129	80 c.p. *s*	11.00	4,059.06	1.10
		69	100 c.p. *s*	12.00		
		165	100 watt *m*	9.50		
		3	150 watt *m*	10.00		
		3	500 watt *m*	15.00		

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "C"—Concluded

Street Lighting Installation in Hydro Municipalities, December 31, 1938; showing Rate per Lamp, Cost to Municipality in 1938, and Cost per Capita.

Municipality	Population	Number of lamps	Size and style of lamps	Interim rate per lamp per annum	Cost to municipality in 1938	Cost per capita
				$ c.	$ c.	$ c.
Wiarton........	1,743	104	100 watt *m*	15.00	2,304.03	1.32
		26	200 watt *m*	24.00		
Williamsburg...	....	16	100 watt *m*	15.00	240.00	**
Winchester.....	1,041	118	100 watt *m*	8.00	944.00	0.91
Windermere....	128	13	100 watt *m*	30.00	390.00	3.05
Windsor........	102,704	943	100 c.p. *s*	11.00	100,398.12	††
		94	250 c.p. *s*	15.00		
		73	400 c.p. *s*	19.00		
		3	600 c.p. *s*	26.00		
		2,453	100 c.p. orn. *s*	13.00		
		1,076	250 c.p. orn. *s*	17.00		
		660	400 c.p. orn. *s*	21.50		
		3	1,000 c.p. orn. *s*	35.00		
		140	100 watt *m*	8.50		
		3	150 watt *m*	11.50		
		25	200 watt *m*	13.50		
		1	300 watt *m*	19.00		
		1,506	100 watt orn. *m*	10.00		
		195	150 watt orn. *m*	13.00		
		205	200 watt orn. *m*	15.00		
Wingham.......	2,085	106	150 c.p. *s*	17.00	3,372.00	1.62
		25	250 c.p. *s*	30.00		
		22	200 watt *m*	30.00		
		8	Strings 200 watt ea. *m*	45c. per 100 watts per month		
Woodbridge....	831	94	100 watt *m*	10.00	950.36	1.14
		2	300 watt *m*	23.00		
Woodstock.....	11,382	553	100 c.p. *s*	8.00	8,467.44	0.74
		12	250 c.p. *s*	20.00		
		98	100 watt *m*	8.00		
		22	150 watt *m*	12.00		
		78	300 watt *m*	32.00		
		1	250 watt *m* floodlight (6 mos.)	12.00		
Woodville......	418	37	100 watt *m*	12.00	620.03	1.48
		5	500 watt *m*	38.00		
Wyoming.......	528	52	100 watt *m*	15.00	780.00	1.48
Zurich.........	....	63	100 watt *m*	11.00	693.00	**

**Population not shown in Government statistics. *s* Series system. *m* Multiple system.

††Certain additional street lighting costs for special service are paid direct in form of debenture charges.

STATEMENT "D"

(pages 378 to 395)

Statistics relating to the Supply of Electrical Energy to Consumers
in Ontario Urban Municipalities Served by
The Hydro-Electric Power Commission
for the year 1938

STATEMENT "E"

(pages 396 to 411)

Cost of Power to Municipalities and Rates to Consumers for
Domestic Service—Commercial Light Service—Power Service
in Ontario Urban Municipalities Served by
The Hydro-Electric Power Commission
for the year 1938

STATEMENT "D"

Statistics Relating to the Supply of Electrical Energy to Consumers in Urban Municipalities Served by The Hydro-Electric Power Commission

Regarding the results of Hydro operation from the standpoint of the consumers, the following tabulation gives much useful and interesting information. For each main class of service in each urban municipal utility receiving power at cost from the Commission, Statement "D" lists the revenue, the consumption and the number of consumers, together with unit average costs and consumptions and other pertinent data.

The policy and practice of the Commission has been, and is, to make as widespread and beneficial a distribution of electrical energy as possible, and to extend to every community that can economically be reached by transmission lines, the benefit of electrical service. Even where, in certain localities, by reason of the distance from a source of supply or on account of the small quantity of power required by the municipality, the cost per horsepower to the municipality—and, consequently, the cost of service to the consumer—must unavoidably be higher than in more favourably situated communities, service has not been withheld when the consumers were able and willing to pay the cost.

The accompanying diagram summarizes graphically certain data of Statement "D" respecting the average cost to the consumer. It will be observed that the total amount of the energy sold in municipalities where circumstances necessitate rates which result in the higher average costs to the consumer is relatively insignificant. With respect to power service, it should be noted that the statistics of Statement "D", and of the diagram, cover mainly retail power service supplied to the smaller industrial consumers. The average amount of power taken by the industrial consumers served by the municipalities is about 45 horsepower. The Commission serves certain large power consumers direct on behalf of the various systems of municipalities.

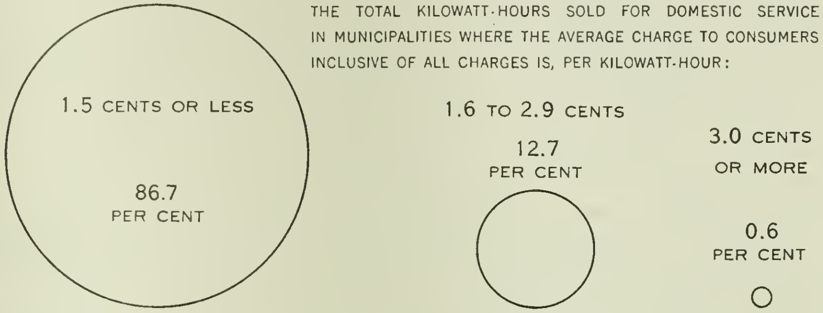
It should be kept in mind that the revenues reported in Statement "D," and used for purposes of calculating the net unit costs to the consumer, are the total revenues contributed by the consumers, and provide, in addition to the cost of power, sums specifically applicable to the retirement of capital, and also operating surplus which is in part applied to retirement of capital or extension of plant and is in part returned in cash to the consumers.

It should also be noted that average costs per kilowatt-hour or per horsepower if employed indiscriminately as a criterion by means of which to compare the rates or prices for electrical service in various municipalities, will give misleading results. The average costs per kilowatt-hour, as given in Statement "D" for respective classes of service in each municipality, are statistical results obtained by dividing the respective revenues by the aggregate kilowatt-hours sold. As such, the data reflect the combined influence of a number of factors, of which the rates or prices to consumers are but one factor. Owing to the varying influence of factors other than the rates, it is seldom found that in any two municipalities the average cost per kilowatt-hour to the consumers, even of the same classification, is in proportion to the respective rates for service. Instances even occur where for a class of consumers in one municipality, the average costs per kilowatt-hour are substantially lower than for the same class in another municipality, even though the rates are higher.

COST OF ELECTRICAL SERVICE
IN MUNICIPALITIES SERVED BY
THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

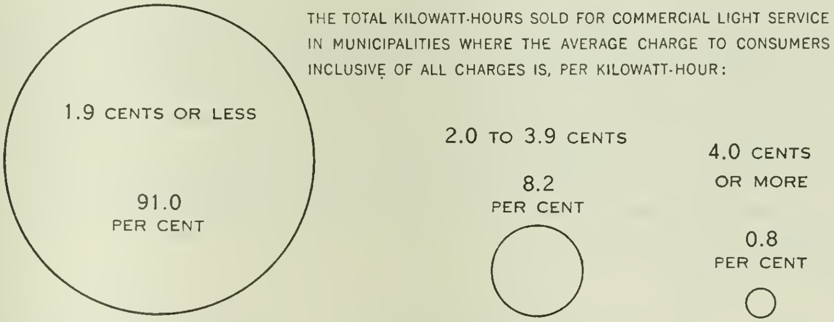
DOMESTIC SERVICE

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE TOTAL KILOWATT-HOURS SOLD FOR DOMESTIC SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER KILOWATT-HOUR:



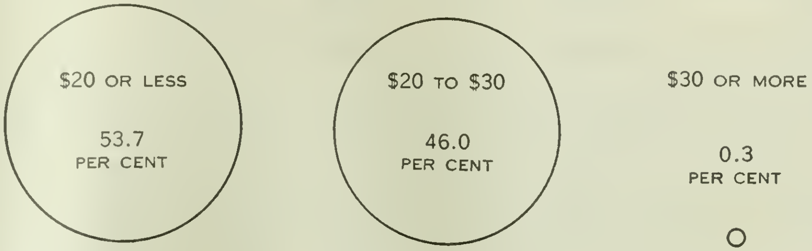
COMMERCIAL LIGHT SERVICE

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE TOTAL KILOWATT-HOURS SOLD FOR COMMERCIAL LIGHT SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER KILOWATT-HOUR:



POWER SERVICE SUPPLIED BY MUNICIPALITIES

THE AREAS OF THE CIRCLES REPRESENT PROPORTIONATELY THE AGGREGATE HORSEPOWER SOLD FOR POWER SERVICE IN MUNICIPALITIES WHERE THE AVERAGE CHARGE TO CONSUMERS INCLUSIVE OF ALL CHARGES IS, PER HORSEPOWER PER YEAR:



With respect to domestic service, for example, instances may be observed where two municipalities have identical prices or rates for domestic service, but the average cost per kilowatt-hour to the consumer varies by as much as 50 per cent or more. Such variations are due principally to differences in the extent of utilization of the service for the operation of electric ranges, water heaters and other appliances, an indication of which is afforded by the statistics of average monthly consumption.

In the case of power service, average unit costs are still less reliable as an indication of the relative rates for service in different municipalities. In the case of hydro-electric power supplied to industries at cost, the rate schedules incorporate charges both for demand and for energy consumption, and thus, although the quantity of power taken by a consumer—that is, the demand as measured in horsepower—is the most important factor affecting costs and revenues, it is not the only one. The number of hours the power is used in the month or year—which, in conjunction with the power, determines the energy consumption, as measured in kilowatt-hours—also affects the costs and revenues. Consequently, in two municipalities charging the same rates for power service, the average cost per horsepower to the consumer will vary in accordance with the consumers' average number of hours' use of the power per month. A greater average energy consumption per horsepower increases the average cost per horsepower and decreases the average cost per kilowatt-hour to the consumer, and *vice versa.**

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*In view of the fact that the data of Statement "D" have been misinterpreted in the making of certain comparisons as to the cost of electricity in various territories, it is desirable to add a word of caution respecting their significance. Essentially, the average cost or revenue per kilowatt-hour is *not a criterion of rates* even with similar forms of rate schedules and for the same class of service. Particularly is this true when revenues and consumptions of all classes of service and of all kinds of rate schedules, are indiscriminately lumped together in order to deduce a so-called "average cost or rate per kilowatt-hour" for all services.

In one community rates for each class of service, and the cost to every consumer in each class for any given service and consumption, may be substantially higher than in another community, and yet there may be in the former community a lower "average revenue per kilowatt-hour."

Example.—Assume sales of electrical energy by two electric utilities, A and B, in each case 10,000,000 kilowatt-hours.

Class of service	Case A Higher rates and lower revenues per kilowatt-hour			Case B Lower rates and higher revenues per kilowatt-hour		
	Energy sales	Rate per kw-hr.	Revenue	Energy sales	Rate per kw-hr.	Revenue
	kw-hr.	cents	$	kw-hr.	cents	$
Residence..........	1,000,000	4	40,000	3,000,000	3	90,000
Power............	9,000,000	1	90,000	7,000,000	0.75	52,500
Total..........	10,000,000	....	130,000	10,000,000	....	142,500
Average revenue...	1.3 cents per kw-hr.			1.425 cents per kw-hr.		

It will be observed that in Case A *the rates* both for residence and for power service are 33 per cent *higher* than in Case B, but the *average revenue* per kilowatt-hour is nearly 9 per cent less.

In this instance, the explanation lies in the *relative quantities* of energy sold to each class. Service to large power consumers entails a smaller capital investment in distribution lines and equipment and lower operating costs per kilowatt-hour delivered, than does service to domestic and to commercial light consumers, and even where the rates for all classes of service are low, produces a smaller average revenue per kilowatt-hour. Consequently, if one electrical utility as compared with another sells a larger proportion of its energy for power purposes, its "average revenue per kilowatt-hour" may easily be lower than that of the other utility even though its rates for every class of service are substantially higher.

Although the derived statistics of Statement "D" are valueless as a means of comparing the *rates* in one municipality with those in another, they nevertheless fulfil a function in affording a general measure of the *economy of service* to consumers in the co-operating Ontario municipalities—an economy that has resulted primarily from the low rates themselves, and secondarily from the extensive use of the service that has been made possible by the low rates.

Actual bills rendered to typical consumers for similar service under closely comparable circumstances constitute the best basis for making comparisons. In researches respecting rates to consumers therefore the actual *rate schedules* of Statement "E" should be employed, and not statistics of average revenues per kilowatt-hour, as these are valueless for rate comparisons—and particularly so when all classifications of service are combined.

In any consideration of the relative economies of electrical service in the various municipalities—whether based on the actual rates for service as set forth in Statement "E", or on the derived statistics resulting from the rates and other factors as presented in Statement "D"—full account should be taken respectively of the influence upon costs of such factors as the size of the municipality, the distance from the source of power, the features of the power developments from which service is received, the sizes and concentrations of adjacent markets for electricity, and the sizes and characters of the loads supplied under the various classifications by the local electrical utility to the consumers.

In Statement "D" account has been taken of the sizes of municipalities by grouping them according to whether they are (i) cities—over 10,000 population; (ii) towns of 2,000 to 10,000 population; or (iii) small towns (under 2,000 population), villages, and suburban areas in townships (which are comparable in respect of conditions of supply to the smaller towns and villages). The populations are also given, and the situation of any municipality with respect to transmission lines and power supplies may be ascertained by consulting the map at the end of the Report and the diagrams of stations in Section II.

A feature of the electrical service in Ontario municipalities served by The Hydro-Electric Power Commission is the strikingly large average annual consumption per domestic consumer. There are in all more than 240 Ontario municipalities where the average annual consumption per domestic consumer is in excess of 600 kilowatt-hours. Of the 83 cities and towns with populations of 2,000 or more—in which over 85 per cent of the domestic consumers of the undertaking are served—no less than 74 have an average annual consumption per domestic consumer in excess of 1,000 kilowatt-hours; of these, 41 have an average annual consumption per domestic consumer in excess of 1,500 kilowatt-hours, and 17 have an average annual consumption per domestic consumer in excess of 2,000 kilowatt-hours.

The high average consumption for domestic service results essentially from the policy of the undertaking in providing service "at cost"; the rate schedules designed according to this principle automatically encourage liberal use of the service. Under the standard rate schedules employed by Ontario municipalities, follow-up rates of 1 cent and 1.25 cents (less 10 per cent) are in common use, and as a rule even where the higher initial rates per kilowatt-hour obtain, it is only necessary for the domestic consumer to reach a monthly charge of from $2.00 to $3.00 to obtain the benefit of a follow-up rate of 1.8 cents net. The cost of electric cooking is thus within reach of most of the domestic consumers in Ontario. Electric water heating is also encouraged by low flat rates for continuous heaters and by installation of equipment without capital cost to the consumer.

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group I—CITIES

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Belleville	E.O.	14,560	75,477.81	7,461,618	3,285	189	1.91	1.0
Brantford	Nia.	31,282	166,887.81	13,217,260	7,698	143	1.81	1.2
Chatham	Nia.	16,153	87,034.29	5,090,089	4,059	105	1.78	1.7
Fort William	T.B.	24,020	196,286.31	33,228,577	5,740	482	2.85	0.6
Galt	Nia.	14,410	88,226.40	6,321,470	3,809	138	1.93	1.4
Guelph	Nia.	21,333	106,395.69	9,128,089	5,289	144	1.68	1.2
Hamilton	Nia.	153,527	825,482.68	69,044,266	38,779	148	1.77	1.2
Kingston	E.O.	24,331	130,998.05	11,565,695	6,239	154	1.75	1.1
Kitchener	Nia.	32,550	192,841.68	16,850,856	7,591	185	2.12	1.1
London	Nia.	74,281	513,867.77	51,391,493	17,845	240	2.40	1.0
Niagara Falls	Nia.	18,747	129,362.85	11,253,171	4,580	204	2.35	1.1
Oshawa	E.O.	24,844	168,723.26	9,824,934	6,278	130	2.24	1.7
Ottawa	E.O.	142,852	515,503.30	58,256,559	13,645	350	3.15	0.9
Owen Sound	G.B.	13,118	61,153.39	4,250,368	3,315	107	1.54	1.4
Peterborough	E.O.	23,450	146,900.81	11,965,265	5,590	178	2.19	1.2
Port Arthur	T.B.	20,302	109,993.88	12,227,022	4,909	208	1.87	0.9
St. Catharines	Nia.	27,426	130,679.17	11,839,404	6,775	146	1.61	1.1
St. Thomas	Nia.	16,208	117,048.75	11,453,111	4,265	224	2.28	1.0
Sarnia	Nia.	18,155	94,073.85	5,898,719	4,687	105	1.67	1.6
Stratford	Nia.	17,615	134,441.07	10,029,042	4,252	197	2.63	1.3
Sudbury	N.O.P.	26,315	195,099.94	10,400.647	5,888	147	2.76	1.9
Toronto	Nia.	648,309	4,271,141.48	348,674,691	164,087	177	2.17	1.2
Toronto D.C. and 60 cycle†	......	....	17,406.11	596,194	319	156	4.55	2.9
Welland	Nia.	10,924	52,838.63	3,366,978	2,486	113	1.77	1.6
Windsor	Nia.	102,704	707,507.43	47,070,126	23,653	165	2.49	1.5
Woodstock	Nia.	11,382	69,738.33	6,051,620	3,100	162	1.87	1.2

†This—with the exception of a relatively small D.C. power load—is a special service not created by The Hydro-Electric Power Commission but acquired through the purchase of a privately owned company. It does not include street railway power.

Group II—TOWNS

Amherstburg	Nia.	2,869	20,822.98	1,435,706	642	186	2.70	1.5
Barrie	G.B.	8,135	55,608.64	4,122,275	2,066	166	2.24	1.3
Bowmanville	E.O.	3,850	27,271.72	1,485,967	1,143	108	1.99	1.8
Brampton	Nia.	5,638	39,357.55	2,833,124	1,446	163	2.27	1.4
Brockville	E.O.	9,983	48,290.09	4,044,673	2,823	111	1.43	1.2
Carleton Place	E.O.	4,278	17,670.96	1,107,470	998	92	1.48	1.6
Cobourg	E.O.	5,125	30,102.72	1,657,966	1,282	108	1.96	1.8
Collingwood	G.B.	5,478	26,656.94	1,494,161	1,350	92	1.65	1.8
Dundas	Nia.	4,839	21,466.72	1,309.324	1,256	88	1.42	1.6
Dunnville	Nia.	4,004	13,531.56	778,083	904	73	1.25	1.7

"D"

in Ontario Municipalities Served by the Commission and for Power Service during the year 1938

Population, 10,000 or more

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
47,956.73	3,715,185	610	508	6.55	1.3	38,376.00	97	2,583.1	3,992
74,787.61	7,480,183	1,142	546	5.46	1.0	*126,415.23	140	7,613.6	8,980
77,608.46	4,881,561	769	529	8.41	1.6	73,694.51	105	3,732.7	4,933
62,034.35	2,571,200	917	234	5.64	2.4	63,855.34	117	3,904.6	6,774
42,124.78	2,601,824	501	433	7.01	1.6	106,027.12	119	5,743.1	4,429
54,636.47	4,507,820	789	476	5.77	1.2	121,266.19	132	7,555.0	6,210
427,981.93	37,639,514	5,152	608	6.92	1.1	1,654,825.00	1,250	103,758.8	45,181
84,357.06	6,254,418	927	562	7.58	1.3	106,937.86	142	6,067.3	7,308
115,372.85	8,416,464	1,051	668	9.16	1.4	281,125.98	240	14,650.3	8,882
196,729.35	15,917,833	2,103	638	7.80	1.2	415,371.51	443	22,490.5	20,391
59,700.86	5,567,557	712	652	6.99	1.1	81,282.45	86	4,604.3	5,378
66,447.93	3,294,669	554	496	9.99	2.0	233,378.22	107	11,166.8	6,939
191,360.07	11,828,243	1,355	727	11.77	1.6	73,485.21	181	4,615.7	15,181
40,557.61	2,612,607	564	386	5.99	1.6	43,128.16	114	2,627.0	3,993
79,392.37	4,747,510	910	435	7.27	1.7	110,471.15	159	6,210.2	6,659
61,850.92	5,325,992	858	517	6.01	1.1	612,366.75	110	36,261.2	5,877
61,578.11	5,106,030	807	527	6.36	1.2	160,903.63	158	11,096.9	7,740
51,146.37	4,248,320	619	572	6.88	1.2	55,029.57	77	3,580.5	4,962
48,019.68	3,388,198	634	445	6.31	1.4	159,863.06	80	6,650.9	5,401
54,465.10	3,049,746	602	422	7.54	1.8	60,424.02	116	3,031.7	4,970
172,015.75	4,556,810	1,001	379	14.32	3.8	51,575.05	169	2,005.5	7,058
2,790,588.61	173,090,806	24,754	583	9.39	1.6	‡3,682,242.97	4,259	161,666.0	194,835
72,686.14	1,720,858	616	233	9.83	4.2	321,267.08	800	11,961.0	1,735
32,992.58	2,277,784	480	395	5.73	1.4	87,115.95	80	4,085.7	3,046
344,548.89	21,799,527	3,192	569	8.99	1.6	524,434.43	447	25,714.9	27,292
39,484.32	2,895,100	473	510	6.95	1.4	76,030.20	91	4,995.6	3,664

NOTE—The above group of 25 cities utilizes about 80 per cent of the power distributed by the Commission to the urban municipal utilities of Ontario.

*Includes only 25-cycle data. ‡Does not include street railway power.

of Population, 2,000 or more

6,828.31	370,908	125	247	4.55	1.8	5,667.01	15	229.3	782
35,031.45	2,085,508	417	417	7.00	1.7	18,171.91	47	1,021.7	2,530
9,787.18	473,259	154	256	5.30	2.1	45,892.95	27	1,859.6	1,324
18,648.23	1,118,794	248	376	6.27	1.7	19,059.69	54	1,290.6	1,748
27,282.22	1,953,871	435	374	5.23	1.4	38,196.19	72	2,310.0	3,330
9,078.80	434,725	196	185	3.86	2.1	24,506.08	18	1,319.0	1,212
19,118.32	849,303	278	255	5.73	2.2	24,012.78	50	1,257.0	1,584
12,282.37	571,577	200	238	5.12	2.1	22,387.14	55	1,382.1	1,605
11,821.21	784,003	189	346	5.21	1.5	22,739.58	36	1,599.3	1,481
14,068.54	844,115	220	320	5.33	1.7	12,494.08	25	835.8	1,149

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group II—TOWNS

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Elmira	Nia.	2,069	15,075.11	868,308	518	139	2.42	1.7
Fergus	Nia.	2,785	16,323.75	1,031,930	660	130	2.06	1.6
Forest Hill	Nia.	10,208	186,013.59	14,051,800	2,832	413	5.47	1.3
Georgetown	Nia.	2,325	17,179.50	1,084,608	741	122	1.93	1.6
Goderich	Nia.	4,488	29,939.91	1,664,276	1,232	113	2.03	1.8
Hanover	G.B.	3,191	19,572.76	1,047,335	747	117	2.18	1.9
Hespeler	Nia.	2,810	14,239.95	757,137	735	86	1.61	1.9
Humberstone	Nia.	2,629	10,264.65	489,137	634	64	1.35	2.1
Huntsville	G.B.	2,707	12,031.50	1,048,600	674	130	1.49	1.1
Ingersoll	Nia.	5,177	30,599.78	2,156,305	1,404	128	1.82	1.4
Kincardine	G.B.	2,458	15,666.78	569,403	670	71	1.95	2.8
Kingsville	Nia.	2,363	13,951.86	824,556	618	111	1.88	1.7
Leamington	Nia.	5,446	26,717.34	1,773,670	1,436	103	1.55	1.5
Lindsay	E.O.	7,294	40,425.68	2,731,783	1,961	116	1.72	1.5
Listowel	Nia.	2,826	16,292.40	1,033,619	746	115	1.82	1.6
Long Branch	Nia.	4,140	26,391.23	1,566,041	1,256	104	1.75	1.7
Meaford	G.B.	2,719	12,983.77	613,857	664	77	1.63	2.1
Merritton	Nia.	2,644	12,735.36	983,819	690	119	1.54	1.3
Midland	G.B.	6,669	35,654.70	2,282,150	1,584	120	1.88	1.6
Mimico	Nia.	6,940	53,267.68	4,026,001	1,843	182	2.41	1.3
Napanee	E.O.	3,018	22,793.81	1,468,855	816	150	2.33	1.6
New Toronto	Nia.	7,095	36,224.01	2,675,974	1,705	131	1.77	1.4
Orangeville	G.B.	2,479	15,348.73	802,784	686	98	1.86	1.9
Paris	Nia.	4,325	23,318.19	1,993,643	1,163	143	1.67	1.2
Penetanguishene	G.B.	4,177	11,674.28	550,634	647	71	1.50	2.1
Perth	E.O.	4,183	23,491.92	1,648,251	1,016	135	1.93	1.4
Petrolia	Nia.	2,711	11,695.44	594,488	750	76	1.50	2.0
Picton	E.O.	3,410	20,642.09	1,297,245	975	111	1.76	1.6
Port Colborne	Nia.	6,348	29,568.31	1,570,055	1,445	91	1.71	1.9
Port Hope	E.O.	4,577	25,170.67	1,601,864	1,319	101	1.59	1.6
Prescott	E.O.	2,850	16,299.10	1,265,533	742	142	1.83	1.3
Preston	Nia.	6,415	30,972.58	2,244,939	1,515	123	1.70	1.4
Riverside	Nia.	5,090	38,131.41	1,741,771	1,299	112	2.45	2.2
St. Marys	Nia.	4,017	28,016.58	1,516,160	1,017	124	2.30	1.8
Simcoe	Nia.	5,826	25,187.36	1,565,710	1,446	90	1.45	1.6
Smiths Falls	E.O.	7,626	43,924.81	2,988,436	1,806	138	2.03	1.5
Strathroy	Nia.	2,947	20,208.96	1,506,403	830	151	2.03	1.3
Swansea	Nia.	5,831	64,781.02	4,532,952	1,746	216	3.09	1.4
Tecumseh	Nia.	2,245	12,087.58	438,065	569	64	1.77	2.8
Thorold	Nia.	4,904	18,249.51	1,362,739	1,152	99	1.32	1.3
Tillsonburg	Nia.	3,828	16,861.20	1,046,451	1,087	80	1.29	1.6
Trenton	E.O.	6,480	29,248.48	1,844,583	1,417	108	1.72	1.6
Walkerton	G.B.	2,358	15,177.95	835,713	604	115	2.09	1.8
Wallaceburg	Nia.	4,537	18,080.67	1,058,415	1,107	80	1.36	1.7
Waterloo	Nia.	8,425	58,839.56	5,451,400	1,974	230	2.48	1.1
Weston	Nia.	5,048	44,635.78	4,432,767	1,334	277	2.79	1.0
Whitby	E.O.	3,706	22,465.80	1,595,016	899	148	2.08	1.4
Wingham	G.B.	2,085	12,228.59	577,951	561	87	1.82	2.1

"D"—Continued

in Ontario Municipalities Served by the Commission
and for Power Service during the year 1938
Population, 2,000 or more

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horsepower	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
7,208.93	289,668	122	198	4.92	2.5	6,099.32	21	342.3	661
6,612.53	225,605	111	169	4.96	2.9	13,299.71	14	656.3	785
21,570.01	1,333,101	215	517	8.36	1.6	2,775.61	20	155.5	3,067
7,018.92	382,193	130	245	4.50	1.8	23,441.14	28	1,174.9	899
16,731.86	743,650	241	257	5.79	2.2	13,523.49	20	638.9	1,493
7,865.78	377,541	139	226	4.72	2.1	19,589.11	23	835.4	909
5,403.26	304,782	100	254	4.50	1.8	35,585.22	28	1,753.5	863
2,801.60	172,257	62	231	3.77	1.6	4,188.25	6	184.3	702
9,828.51	610,229	126	404	6.50	1.6	13,649.11	15	849.0	815
16,250.13	1,041,902	232	374	5.83	1.5	27,145.04	47	1,609.7	1,683
8,887.73	270,675	118	191	6.28	3.3	11,507.90	17	500.9	805
7,110.03	398,345	150	221	3.95	1.8	4,598.34	16	228.6	784
17,610.38	1,036,750	259	334	5.67	1.7	23,604.71	31	1,326.6	1,726
26,070.16	1,310,337	331	330	6.56	2.0	28,174.73	72	1,574.8	2,364
10,484.46	539,459	154	292	5.67	1.9	13,011.75	23	708.7	923
6,006.00	401,869	96	348	5.21	1.5	2,552.81	7	119.9	1,359
7,762.61	357,509	141	211	4.59	2.2	8,088.72	19	419.8	824
2,759.69	174,820	68	214	3.38	1.6	108,649.24	13	5,635.8	771
16,542.12	927,375	222	348	6.21	1.8	50,537.69	62	3,668.5	1,868
10,512.14	657,090	144	380	6.08	1.6	11,267.59	19	497.5	2,006
14,261.30	644,919	197	273	6.03	2.2	10,280.40	30	592.8	1,043
16,284.24	1,338,292	210	531	6.46	1.2	131,879.45	31	6,348.5	1,946
9,943.00	463,989	156	248	5.31	2.1	6,766.64	25	378.3	867
8,209.49	576,015	190	253	3.60	1.4	14,087.24	23	879.5	1,376
6,519.25	276,914	104	222	5.22	2.4	18,058.08	27	738.4	778
13,786.32	748,976	200	312	5.75	1.8	14,544.69	26	817.8	1,242
7,479.94	322,387	178	151	3.50	2.3	23,546.57	68	872.6	996
14,849.30	868,974	195	371	6.35	1.7	5,924.55	33	444.6	1,203
15,772.96	983,010	224	365	5.87	1.6	19,925.79	25	964.7	1,694
12,345.72	634,766	213	248	4.83	2.0	28,172.08	39	1,396.3	1,571
9,492.85	567,532	176	269	4.49	1.7	4,794.59	20	338.9	938
18,011.03	1,039,393	226	383	6.64	1.7	39,979.47	44	2,426.0	1,785
4,232.80	190,464	55	288	6.41	2.2	5,417.95	7	199.9	1,361
10,914.34	492,013	167	246	5.45	2.2	22,881.17	41	925.4	1,225
28,550.02	2,016,501	358	469	6.64	1.4	28,115.73	41	1,312.5	1,845
15,573.64	966,654	278	290	4.67	1.6	22,562.05	44	1,128.2	2,128
11,459.54	621,775	174	298	5.48	1.8	11,116.91	31	603.4	1,035
6,530.04	357,527	76	392	7.16	1.9	15,945.58	13	723.6	1,835
3,895.90	158,742	53	250	6.13	2.5	2,165.94	3	92.2	625
7,248.75	562,302	161	286	3.75	1.3	38,554.18	17	2,103.0	1,330
14,718.12	972,778	236	343	5.20	1.5	10,904.47	33	777.2	1,356
19,261.14	947,551	262	301	6.13	2.0	54,905.89	52	2,738.5	1,731
9,027.13	415,491	140	247	5.37	2.2	5,981.69	17	223.5	761
11,531.52	593,290	241	205	3.99	1.9	54,013.66	36	2,037.1	1,384
24,645.46	1,682,303	258	543	7.96	1.5	35,446.09	72	2,129.5	2,304
10,225.05	791,588	177	373	4.81	1.3	45,920.12	30	2,470.0	1,541
11,879.36	647,839	164	329	6.04	1.8	14,725.99	21	632.3	1,084
7,688.70	319,846	148	180	4.33	2.4	10,561.87	24	431.7	733

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

NOTE—The power used in the smaller places and rural districts is, and possibly must always be, a relatively small proportion of the power distributed by the Commission. Thus, the power used by the small municipalities in the following group, which includes small towns, villages and certain suburban areas in townships, is less than 10 per cent of the power distributed by the Commission to Ontario municipalities. This relatively small proportion of the total power,

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Acton	Nia.	1,916	10,382.62	722,033	499	121	1.73	1.4
Agincourt	Nia.	P.V.	4,722.01	322,107	151	178	2.61	1.5
Ailsa Craig	Nia.	472	2,407.54	105,011	139	63	1.44	2.3
Alexandria	E.O.	1,919	7,097.15	157,887	329	40	1.80	4.5
Alliston	G.B.	1,340	9,194.42	335,900	353	79	2.17	2.7
Alvinston	Nia.	650	3,859.05	73,125	165	37	1.95	5.3
Ancaster Twp	Nia.	....	10,355.94	581,951	310	156	2.81	1.8
Apple Hill	E.O.	P.V.	1,255.45	26,112	54	40	1.94	4.8
Arkona	Nia.	406	2,703.98	60,249	102	49	2.21	4.5
Arthur	G.B.	1,035	5,260.15	113,382	198	48	2.21	4.6
Athens	E.O.	691	3,110.74	68,680	163	35	1.59	4.5
Aylmer	Nia.	1,998	10,941.81	672,570	685	82	1.33	1.6
Ayr	Nia.	755	5,252.23	233,880	225	87	1.94	2.2
Baden	Nia.	P.V.	3,632.28	219,221	148	123	2.05	1.7
Bath	E.O.	346	1,675.92	31,798	44	60	3.17	5.3
Beachville	Nia.	P.V.	3,004.61	170,272	152	99	1.68	1.7
Beamsville	Nia.	1,121	9,669.58	607,339	337	150	2.39	1.6
Beaverton	G.B.	949	6,065.90	326,006	331	82	1.53	1.9
Beeton	G.B.	555	3,427.61	62,386	127	54	2.25	4.2
Belle River	Nia.	810	4,392.24	210,540	238	74	1.54	2.1
Blenheim	Nia.	1,775	8,525.46	470,130	536	73	1.33	1 8
Bloomfield	E.O.	666	3,118.12	123,577	177	58	1.47	2.5
Blyth	Nia.	652	3,490.29	114,019	172	55	1.69	3.1
Bolton	Nia.	567	4,174.46	203,303	172	99	2.02	2.1
Bothwell	Nia.	643	2,617.42	135,600	182	62	1.20	1.9
Bradford	G.B.	988	6,307.31	213,205	235	76	2.24	3.0
Brantford Twp	Nia.	....	21,179.00	1,222,837	959	112	1.94	1.7
Brechin	G.B.	P.V.	1,014.97	23,496	48	41	1.76	4.3
Bridgeport	Nia.	P.V.	4,639.47	186,860	154	101	2.51	2.5
Brigden	Nia.	P.V.	2,349.89	65,496	123	48	1.73	3.6
Brighton	E.O.	1,366	8,868.36	257,043	519	41	1.42	3.5
Brussels	Nia.	780	4,573.10	147,517	236	52	1.61	3.1
Burford	Nia.	P.V.	4,187.77	248,563	195	106	1.79	1.7
Burgessville	Nia.	P.V.	1,446.53	42,886	54	66	2.23	3.4
Caledonia	Nia.	1,410	6,134.95	277,067	388	59	1.32	2.2
Campbellville	Nia.	P.V.	1,517.52	36,398	48	63	2.63	4.2
Cannington	G.B.	76	5,378.49	217,368	255	71	1.76	2.5
Capreol	N.O.P.	1,730	9,043.00	212,243	304	58	2.49	4.3
Cardinal	E.O.	1,529	6,786.01	378,145	365	86	1.55	1.8
Cayuga	Nia.	664	3,799.55	115 614	157	61	2.02	3.3

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1938

VILLAGES AND SUBURBAN AREAS

however, exerts upon the economic life of the Province a most beneficial influence. It should further be appreciated that about 35 per cent of these municipalities obtain their power, not from Niagara, but from relatively small water-power developments throughout the Province. The net cost per kilowatt-hour given in the table is the cost inclusive of all charges. Consult also introduction to Statement "D", page 378.

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
4,373.32	243,732	91	223	4.00	1.8	13,505.48	15	555.0	605
1,243.66	52,747	26	169	3.98	.4	1,207.60	3	63.9	180
1,396.55	51,855	40	108	2.91	2.7	1,045.96	2	45.9	181
5,294.52	113,615	108	88	4.09	4.7	3,134.35	13	122.7	450
6,622.35	217,850	106	171	5.21	.0	3,177.11	14	102.1	473
2,571.38	56,810	53	89	4.04	4.5	560.36	2	17.9	220
2,681.24	144,340	36	334	6.20	1.9	822.60	7	37.1	353
850.48	23,492	22	89	3.22	3.6	355.80	2	23.7	78
1,624.29	38,216	35	91	3.87	4.3	147.93	2	5.0	139
4,901.84	114,819	89	108	4.59	4.3	2,090.35	4	103.0	291
1,520.14	39,480	50	66	2.53	3.8	945.61	1	33.8	214
8,780.57	539,420	146	307	5.01	1.6	6,920.00	12	376.7	843
1,659.80	68,760	40	143	3.46	2.4	278.60	4	15.9	269
2,039.47	90,284	39	193	4.36	2.3	5,454.92	2	239.9	189
823.16	17,140	18	79	3.81	4.8	....	......	....	62
575.87	24,203	21	96	2.28	2.3	10,699.82	4	453.8	177
4,811.90	212,685	70	253	5.73	2.3	2,874.35	8	160.0	415
2,515.43	142,237	68	174	3.08	1.8	1,304.74	9	74.3	408
2,250.76	51,126	36	118	5.21	4.4	1,522.63	5	73.3	168
2,237.47	102,866	50	171	3.73	2.2	1,080.67	2	31.1	290
7,053.47	418,576	131	305	5.14	1.7	4,374.49	11	193.9	678
1,484.35	47,135	36	109	3.44	.1	804.59	7	33.7	220
1,846.55	60,845	51	99	3.02	3.0	410.35	3	26.8	226
1,361.37	42,194	31	113	3.66	3.2	1,798.87	10	100.0	213
1,458.60	76,730	54	118	2.25	1.9	722.59	7	77.8	243
3,638.39	91,054	67	113	4.53	4.0	2,367.28	10	123.5	312
4,383.56	273,778	53	430	6.89	1.6	3,063.71	7	148.2	1,019
1,163.79	28,331	27	87	3.59	1.4	876.71	4	37.7	79
1,009.02	38,479	23	139	3.65	2.6	235.21	3	10.2	180
2,095.77	59,132	41	120	4.26	3.6	561.41	5	23.2	169
3,816.07	142,473	94	126	3.39	2.7	2,814.72	10	149.0	623
2,723.30	88,551	64	115	3.55	3.1	737.02	2	27.0	302
1,095.51	71,514	32	186	2.85	1.5	1,490.51	2	56.5	229
639.19	17,364	16	90	3.33	3.7	319.57	2	19.5	72
4,817.21	265,926	90	246	4.46	1.8	1,716.23	6	74.0	484
587.51	17,940	11	136	4.45	3.3	....	......	....	59
2,716.72	90,400	70	108	3.23	3.0	575.91	9	35.3	334
4,003.50	122,903	53	193	6.29	3.3	735.77	1	25.0	358
2,196.41	101,485	62	136	2.95	2.2	593.79	3	19.8	430
3,912.00	117,894	62	158	5.25	3.3	1,020.75	8	41.5	227

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Chatsworth	G.B.	321	1,981.46	59,901	85	59	1.94	3.3
Chesley	G.B.	1,815	8,837.28	453,189	427	88	1.72	2.0
Chesterville	E.O.	1,068	4,449.42	268,400	242	92	1.53	1.7
Chippawa	Nia.	1,186	7,419.63	573,155	336	142	1.84	1.3
Clifford	Nia.	446	2,501.18	65,226	121	45	1.72	3.8
Clinton	Nia.	1,901	12,050.06	678,163	549	103	1.83	1.8
Cobden	E.O.	621	2,230.69	58,666	108	45	1.72	3.8
Colborne	E.O.	964	4,870.29	189,770	256	62	1.59	2.6
Coldwater	G.B.	589	3,141.65	170,944	148	96	1.77	1.8
Comber	Nia.	P.V.	2,073.10	74,549	102	61	1.69	2.8
Cookstown	G.B.	P.V.	2,246.66	49,434	103	40	1.82	4.5
Cottam	Nia.	P.V.	2,410.98	80,053	111	60	1.81	3.0
Courtright	Nia.	334	1,830.83	33,060	74	37	2.06	5.5
Creemore	G.B.	632	3,148.30	93,887	151	52	1.74	3.4
Dashwood	Nia.	P.V.	1,531.16	49,300	79	52	1.62	3.1
Delaware	Nia.	P.V.	1,695.43	95,018	56	141	2.52	1.8
Deseronto	E.O.	1,300	5,573.01	189,519	301	52	1.54	2.9
Dorchester	Nia.	P.V.	2,412.24	116,028	146	66	1.38	2.1
Drayton	Nia.	551	3,332.44	125,994	163	64	1.70	2.6
Dresden	Nia.	1,572	6,465.69	306,944	415	61	1.29	2.1
Drumbo	Nia.	P.V.	2,175.81	92,688	90	86	2.01	2.3
Dublin	Nia.	P.V.	1,486.11	33,388	54	52	2.29	4.5
Dundalk	G.B.	666	2,868.77	116,795	173	56	1.38	2.5
Durham	G. B.	1,852	6,661.41	328,781	442	62	1.26	2.0
Dutton	Nia.	807	3,079.23	186,570	220	71	1.17	1.7
East York Twp.	Nia.	....	182,025.90	11,321,483	9,503	99	1.59	1.6
Elmvale	G.B.	P.V.	3,046.17	124,300	177	59	1.43	2.5
Elmwood	G.B.	P.V.	1,310.29	27,183	64	35	1.71	4.8
Elora	Nia.	1,149	7,161.53	365,010	327	93	1.82	2.0
Embro	Nia.	428	2,851.78	143,300	117	102	2.03	2.0
Erieau	Nia.	273	3,676.99	127,368	193	55	1.59	2.9
Erie Beach	Nia.	....	1,827.80	33,566	82	34	1.86	5.4
Essex	Nia.	1,833	8,084.98	420,280	469	75	1.44	1.9
Etobicoke Twp.	Nia.	....	135,407.05	11,040,670	4,081	225	2.76	1.2
Exeter	Nia.	1,652	10,841.50	683,030	459	124	1.97	1.6
Finch	E.O.	371	2,108.48	97,791	96	85	1.83	2.2
Flesherton	G.B.	447	2,482.14	73,876	131	47	1.58	3.4
Fonthill	Nia.	829	5,133.57	199,877	227	73	1.88	2.6
Forest	Nia.	1,502	11,450.46	584,920	461	106	2.07	2.0
Glencoe	Nia.	810	5,013.69	202,604	218	77	1.92	2.5

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1938

VILLAGES AND SUBURBAN AREAS

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horsepower	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
1,560.13	48,306	34	118	3.82	3.2	....	......	....	119
4,963.92	276,920	98	235	4.22	1.8	6,861.15	21	362.9	546
3,641.15	160,561	69	194	4.39	2.3	1,938.02	3	88.0	314
1,960.26	116,769	49	198	3.33	1.7	1,140.74	2	39.7	387
1,976.29	64,758	40	135	4.12	3.1	464.11	1	15.7	162
7,493.62	325,491	151	180	4.14	2.3	4,452.87	16	196.6	716
2,426.74	57,489	50	96	4.04	4.2	357.96	1	9.7	159
3,005.24	111,043	76	122	3.30	2.7	826.35	5	47.0	337
1,885.84	65,982	52	106	3.02	2.9	6,460.39	3	262.1	203
1,950.82	63,626	45	117	3.61	3.0	2,226.67	3	80.6	150
1,361.16	36,679	30	102	3.78	3.7	694.84	3	52.1	136
1,387.40	69,382	30	193	3.85	2.0	277.85	1	15.0	142
1,073.78	25,936	24	90	3.73	4.1	806.77	1	12.5	99
2,065.07	59,018	55	89	3.13	3.5	796.00	3	57.7	209
1,074.37	28,320	28	84	3.20	3.8	708.03	2	26.0	109
687.75	26,907	17	132	3.37	2.6	....	......	....	73
2,196.33	59,539	67	74	2.73	3.7	1,982.28	7	73.1	375
909.31	37,104	28	110	2.71	2.4	565.38	2	28.2	176
1,963.02	55,151	63	73	2.60	3.6	1,192.12	5	69.1	231
5,576.09	297,414	119	208	3.90	1.9	3,313.87	10	168.3	544
851.83	30,016	28	89	2.54	2.8	593.96	1	24.2	119
784.17	16,967	22	64	2.97	4.6	1,187.27	2	48.1	78
2,772.73	97,512	72	113	3.21	2.8	2,567.04	5	151.8	250
4,984.65	231,241	104	185	3.99	2.2	4,322.56	14	230.9	560
2,383.11	118,970	67	148	2.96	2.0	2,871.67	9	158.3	296
28,592.90	1,706,712	414	343	5.75	1.7	36,712.42	42	1,634.7	9,959
1,889.87	84,259	57	123	2.76	2.2	2,592.08	8	123.0	242
681.98	15,407	23	56	2.47	4.4	1,135.67	1	39.8	88
3,988.13	173,192	76	190	4.37	2.3	2,737.11	2	139.0	405
1,461.06	44,668	42	88	2.89	3.3	1,063.83	1	37.5	160
1,249.23	45,969	12	319	8.68	2.7	401.00	2	17.8	207
411.22	13,794	3	383	11.42	3.0	....	......	....	85
6,546.59	372,520	119	261	4.58	1.8	7,613.08	19	395.7	607
22,008.18	1,446,592	217	555	8.45	1.5	24,973.49	32	1,208.2	4,330
5,780.80	260,413	119	182	4.05	2.2	3,486.83	11	217.7	589
1,624.33	53,228	35	127	3.87	3.1	354.43	1	9.2	132
1,831.52	57,349	54	89	2.83	3.2	213.09	1	15.6	186
1,585.21	78,604	33	198	4.00	2.0	474.98	4	17.2	264
6,068.86	226,764	120	157	4.21	2.7	4,719.53	22	217.3	603
3,606.77	110,281	78	118	3.85	3.3	3,406.95	6	120.8	302

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Grand Valley	G.B.	600	3,309.53	85,886	163	44	1.69	3.9
Granton	Nia.	P.V.	1,734.57	84,139	85	82	1.70	2.1
Gravenhurst	G.B.	2,052	9,613.27	754,008	502	125	1.60	1.3
Hagersville	Nia.	1,307	5,481.85	291,143	356	68	1.29	1.9
Harriston	Nia.	1,266	7,077.78	323,459	350	77	1.69	2.2
Harrow	Nia.	984	8,785.03	539,751	280	161	2.61	1.6
Hastings	E.O.	762	3,876.91	103,466	196	44	1.65	3.7
Havelock	E.O.	1,164	5,008.14	165,869	287	48	1.45	3.0
Hensall	Nia.	680	3,865.84	152,730	190	67	1.70	2.5
Highgate	Nia.	349	1,623.02	56,935	99	48	1.37	2.9
Holstein	G.B.	P.V.	990.17	15,952	49	27	1.68	6.2
Jarvis	Nia.	505	2,655.00	93,368	143	54	1.55	2.8
Kemptville	E.O.	1,204	6,934.59	327,622	337	81	1.71	2.1
Kirkfield	G.B.	P.V.	889.85	14,482	32	38	2.32	6.1
Lakefield	E.O.	1,332	5,777.12	226,904	323	59	1.49	2.5
Lambeth	Nia.	P.V.	3,163.03	181,448	122	124	2.16	1.7
Lanark	E.O.	702	2,959.64	74,290	160	39	1.54	4.0
Lancaster	E.O.	588	1,936.30	37,210	88	35	1.83	5.2
La Salle	Nia.	812	6,221.29	310,349	203	127	2.55	2.0
London Twp.	Nia.	......	11,851.31	978,103	401	203	2.46	1.2
Lucan	Nia.	614	4,191.68	197,643	178	93	1.96	2.1
Lucknow	G.B.	1,036	6,836.80	191,059	268	59	2.13	3.6
Lynden	Nia.	P.V.	2,130.11	88,415	90	82	1.97	2.4
Madoc	E.O.	1,210	4,793.35	161,571	275	49	1.45	3.0
Markdale	G.B.	781	3,833.57	159,045	223	59	1.43	2.4
Markham	Nia.	1,116	6,901.77	382,808	297	107	1.94	1.8
Marmora	E.O.	1,014	3,356.04	97,639	217	37	1.29	3.4
Martintown	E.O.	P.V.	850.48	22,092	45	41	1.57	3.8
Maxville	E.O.	758	3,587.46	80,000	151	44	1.98	4.5
Merlin	Nia.	P.V.	2,335.50	74,456	114	54	1.71	3.1
Mildmay	G.B.	746	3,163.08	143,914	161	74	1.64	2.2
Milton	Nia.	1,791	12,251.22	654,607	499	109	2.05	1.9
Milverton	Nia.	1,006	4,796.04	320,055	241	111	1.66	1.5
Mitchell	Nia.	1,607	11,595.57	736,053	476	129	2.03	1.6
Moorefield	Nia.	P.V.	1,093.25	21,568	56	32	1.63	5.1
Mt. Brydges	Nia.	P.V.	2,773.56	145,828	150	81	1.54	1.9
Mt. Forest	G.B.	1,946	8,555.89	426,130	471	75	1.51	2.0
Neustadt	G.B.	441	2,031.96	27,576	93	25	1.82	7.4
Newbury	Nia.	279	1,323.57	29,037	68	36	1.62	4.6
Newcastle	E.O.	690	5,808.74	188,481	195	81	2.48	3.0

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1938

VILLAGES AND SUBURBAN AREAS

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
2,176.68	54,532	52	87	3.49	4.0	1,263.19	4	70.6	219
1,060.95	44,527	33	112	2.68	2.4	....	......	....	118
7,696.93	539,071	112	401	5.73	1.4	10,647.22	16	534.8	630
5,841.13	318,733	112	237	4.35	1.8	9,970.67	14	524.0	482
4,825.10	222,358	100	185	4.02	2.2	5,603.60	13	260.5	463
4,689.12	215,224	77	233	5.07	2.2	2,824.56	5	134.2	362
2,012.09	52,161	50	87	3.35	3.8	251.45	4	17.3	250
2,707.53	62,767	63	83	3.58	4.3	2,328.40	3	85.5	353
2,466.46	84,280	59	119	3.48	2.9	3,011.28	14	137.0	263
864.07	28,295	35	67	2.06	3.1	1,041.32	6	58.1	140
640.45	14,462	20	60	2.67	4.4	130.13	1	7.5	70
1,839.20	83,522	44	158	3.48	2.2	3,338.91	4	126.0	191
4,633.63	224,413	84	223	4.60	2.1	4,109.04	7	174.2	428
1,251.14	25,356	20	106	5.21	4.9	....	......	....	52
4,209.36	179,842	66	227	5.31	2.3	3,326.84	6	170.5	395
1,181.33	47,008	25	157	3.94	2.5	523.63	2	50.0	149
1,488.67	41,252	38	90	3.26	3.6	....	......	....	198
1,634.62	38,100	34	93	4.00	4.3	....	......	....	122
1,598.56	71,311	18	330	7.40	2.2	2,223.00	3	70.6	224
2,318.22	146,605	22	555	8.78	1.6	1,590.69	4	72.5	427
1,822.44	58,406	52	94	2.92	3.1	2,301.55	7	111.9	237
3,643.50	90,073	79	95	3.84	4.0	3,621.46	6	135.4	353
737.54	24,220	14	144	4.39	3.0	702.82	2	39.4	106
3,526.75	118,880	90	110	3.27	3.0	1,256.25	6	87.3	371
2,704.92	110,867	87	106	2.59	2.4	1,142.56	10	68.8	320
3,408.16	145,160	70	173	4.06	2.3	2,821.19	9	125.9	376
1,822.96	70,913	48	123	3.16	2.6	393.07	3	30.4	268
932.70	30,409	23	110	3.38	3.1	....	......	....	68
2,596.03	63,209	49	107	4.42	4.1	....	......	....	200
2,056.80	68,875	47	122	3.65	3.0	316.56	1	11.7	162
2,008.67	64,155	51	105	3.28	3.1	909.24	3	29.7	215
5,568.13	361,391	109	276	4.26	1.5	16,400.85	15	672.0	623
3,456.91	165,583	77	179	3.74	2.1	3,171.58	8	197.5	326
5,608.65	293,120	124	197	3.77	1.9	4,338.78	22	288.4	622
942.00	29,760	28	89	2.80	3.2	16.20	1	1.5	85
962.24	37,986	45	71	1.78	2.5	831.76	3	39.9	198
7,127.86	331,578	153	181	3.88	2.1	4,334.38	13	255.0	637
1,024.43	18,279	26	59	3.28	5.6	390.98	1	9.2	120
680.94	14,280	22	54	2.58	4.8	269.44	1	14.0	91
2,335.43	62,904	36	146	5.41	3.7	1,735.45	5	66.8	236

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
New Hamburg	Nia.	1,441	9,466.21	536,321	359	124	2.20	1.8
Niagara-on-the-Lake	Nia.	1,651	13,913.50	1,099,492	522	176	2.22	1.3
Nipigon	T.B.	P.V.	3,652.40	175,966	189	77	1.61	2.1
North York Twp	Nia.	....	140,344.20	8,207,154	3,968	172	2.94	1.7
Norwich	Nia.	1,212	8,126.20	544,160	376	121	1.80	1.5
Norwood	E.O.	716	4,236.22	140,450	225	52	1.57	3.0
Oil Springs	Nia.	470	1,454.44	69,725	88	66	1.38	2.1
Omemee	E.O.	598	2,293.70	103,072	153	56	1.25	2.2
Otterville	Nia.	P.V.	2,240.79	93,329	123	63	1.52	2.4
Paisley	G.B.	773	3,934.83	90,911	193	39	1.70	4.3
Palmerston	Nia.	1,410	9,503.43	594,923	389	127	2.04	1.6
Parkhill	Nia.	997	5,117.47	122,800	256	40	1.67	4.2
Plattsville	Nia.	P.V.	2,396.05	91,486	108	70	1.85	2.6
Point Edward	Nia.	1,161	5,607.06	240,926	292	68	1.60	2.3
Port Credit	Nia.	1,751	13,578.76	1,200,530	477	210	2.37	1.1
Port Dalhousie	Nia.	1,565	15,779.96	1,229,413	617	166	2.13	1.3
Port Dover	Nia.	1,640	8,207.88	378,694	612	52	1.12	2.2
Port Elgin	G.B.	1,293	8,722.32	467,687	435	90	1.67	1.9
Port McNicoll	G.B.	911	3,639.61	128,017	209	51	1.45	2.8
Port Perry	G.B.	1,118	6,846.61	268,241	331	68	1.72	2.6
Port Rowan	Nia.	659	2,905.63	82,632	124	55	1.95	3.5
Port Stanley	Nia.	741 *3,500s	12,544.27	755,563	665	95	1.57	1.6
Priceville	G.B.	P.V.	750.50	10,840	36	25	1.74	6.9
Princeton	Nia.	P.V.	2,246.88	102,464	82	104	2.28	2.2
Queenston	Nia.	P.V.	3,140.55	236,666	77	259	3.44	1.3
Richmond	E.O.	419	1,790.11	56,982	61	78	2.45	2.4
Richmond Hill	Nia.	1,241	8,078.16	597,730	360	138	1.87	1.3
Ridgetown	Nia.	1,956	8,893.88	540,190	569	79	1.30	1.6
Ripley	G.B.	432	3,527.58	69,088	127	45	2.31	5.1
Rockwood	Nia.	P.V.	3,590.80	187,209	158	99	1.89	1.9
Rodney	Nia.	722	3,259.36	140,948	221	53	1.23	2.3
Rosseau	G.B.	300	2,823.64	51,609	63	68	3.73	5.5
Russell	E.O.	P.V.	2,486.88	60,497	118	46	1.89	4.1
St. Clair Beach	Nia.	110	2,142.95	92,358	68	113	2.63	2.3
St. George	Nia.	P.V.	2,978.05	136,982	148	77	1.67	2.2
St. Jacobs	Nia.	P.V.	3,997.99	248,690	130	159	2.56	1.6
Scarboro Twp	Nia.	....	106,102.65	6,853,569	4,907	116	1.80	1.5
Seaforth	Nia.	1,708	9,679.71	561,256	494	95	1.63	1.7
Shelburne	G.B.	1,099	5,612.68	209,500	296	59	1.58	2.7
Southampton	G.B.	1,202	9,556.40	434,900	472	77	1.69	2.2

*Summer resort—Population in August is about 3,500.

"D"—Continued

in Ontario Municipalities Served by the Commission and for Power Service during the year 1938

VILLAGES AND SUBURBAN AREAS

Commercial Light service						Power service			Total number of consumers
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
4,542.10	182,253	104	146	3.64	2.5	4,977.09	12	197.3	475
4,364.21	231,880	83	232	4.38	1.8	2,129.57	8	86.1	613
3,851.60	107,394	58	154	5.53	3.6	636.74	2	44.8	249
22,015.66	878,389	299	245	6.14	2.5	37,995.88	34	1,175.9	4,301
4,163.50	210,990	89	198	3.90	2.0	2,013.15	7	130.4	472
2,305.12	53,930	59	76	3.26	4.3	534.87	2	22.8	286
1,365.11	58,063	33	147	3.45	2.4	6,485.20	36	180.6	157
1,644.84	71,984	45	133	3.05	2.3	2,461.88	6	120.2	204
1,978.69	84,931	40	177	4.12	2.3	415.82	4	19.5	167
2,946.10	83,949	55	127	4.46	3.5	845.69	4	31.0	252
5,315.67	245,628	99	207	4.47	2.2	6,871.70	12	390.4	500
3,527.94	104,240	76	114	3.87	3.4	755.35	3	29.3	335
924.71	36,642	24	127	3.21	2.5	1,079.40	1	44.4	133
2,255.16	72,440	42	143	4.47	3.1	29,810.73	10	1,222.0	344
6,234.66	405,320	91	371	5.71	1.5	3,822.90	8	160.9	576
3,367.33	202,659	52	325	5.40	1.7	4,856.12	13	302.0	682
4,331.54	217,341	116	156	3.11	2.0	4,533.68	13	237.1	741
5,366.44	222,839	102	182	4.38	2.4	3,244.25	6	185.8	543
836.47	31,072	24	108	2.90	2.7	....	......	....	233
3,144.58	98,867	78	106	3.36	3.2	2,921.56	11	145.7	420
1,974.72	61,520	41	125	4.01	3.2	109.12	3	9.9	168
4,395.21	191,856	109	146	3.36	2.3	3,666.71	8	159.1	782
287.48	4,356	10	36	2.40	6.6	120.71	1	3.7	47
801.89	30,308	20	126	3.34	2.6	2,393.68	3	88.9	105
1,068.18	52,180	13	334	6.84	2.0	....	......	....	90
1,470.18	44,915	28	134	4.42	3.3	....	......	....	89
4,056.30	246,966	68	302	4.97	1.6	1,993.52	13	118.0	441
6,361.51	346,196	133	217	3.99	1.9	3,800.25	20	221.5	722
1,608.17	28,498	49	48	2.73	5.6	837.17	1	45.0	177
1,021.47	40,944	35	97	2.43	2.5	369.32	2	13.3	195
2,656.15	97,891	75	108	2.95	2.7	2,201.77	6	97.5	306
1,119.75	18,915	18	88	5.18	5.9	....	......	....	81
1,489.13	31,446	35	75	3.55	4.7	....	......	....	153
2,080.01	77,125	7	918	24.76	2.7	305.09	2	10.4	77
1,428.34	59,970	37	135	3.22	2.4	2,498.21	3	100.2	188
1,615.17	62,805	30	174	4.49	2.6	4,033.63	7	167.0	167
21,787.85	1,238,675	388	266	4.68	1.7	23,614.00	35	940.2	5,330
5,875.27	335,674	120	233	4.08	1.8	4,303.03	14	216.5	628
3,814.48	148,603	81	152	3.92	2.6	2,474.25	14	183.7	391
3,690.09	133,610	90	124	3.42	2.8	3,806.78	12	157.7	574

STATEMENT

Statistics Relating to the Supply of Electric Energy to Consumers For Domestic Service, for Commercial Light Service

Group III—SMALL TOWNS (less than 2,000 population),

Municipality	System	Population	Domestic service					
			Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.
			$ c.	kw-hr.		kw-hr.	$ c.	cents
Springfield	Nia.	378	1,714.68	61,964	101	51	1.41	2.8
Stamford Twp	Nia.	....	60,184.34	4,619,202	1,853	208	2.71	1.3
Stayner	G.B.	1,034	4,736.16	229,151	264	72	1.50	2.1
Stirling	E.O.	938	4,906.62	325,436	296	92	1.38	1.5
Stouffville	Nia.	1,115	7,219.03	306,975	381	67	1.58	2.4
Streetsville	Nia.	672	4,682.95	223,155	185	101	2.11	2.1
Sunderland	G.B.	P.V.	2,574.87	72,531	115	53	1.87	3.6
Sutton	Nia.	852	8,290.38	295,350	426	58	1.62	2.8
Tara	G.B.	472	3,165.71	93,248	148	53	1.78	3.4
Tavistock	Nia.	1,037	7,515.36	476,662	284	140	2.21	1.6
Teeswater	G.B.	838	4,979.86	141,231	227	52	1.83	3.5
Thamesford	Nia.	P.V.	2,918.51	188,056	131	119	1.85	1.5
Thamesville	Nia.	814	3,552.32	177,085	233	63	1.27	2.0
Thedford	Nia.	593	3,059.67	75,526	148	43	1.72	4.1
Thorndale	Nia.	P.V.	1,656.32	47,395	68	58	2.03	3.5
Thornton	G.B.	P.V.	1,476.17	21,958	62	30	1.98	6.7
Tilbury	Nia.	1,980	6,508.68	375,766	445	70	1.22	1.7
Toronto Twp	Nia.	....	65,982.08	4,669,319	2,254	173	2.43	1.4
Tottenham	G.B.	526	3,582.65	74,618	137	45	2.18	4.8
Trafalgar Twp. No. 1	Nia.	....	14,135.14	742,865	360	172	3.27	1.9
Trafalgar Twp. No. 2	Nia.	....	5,146.40	236,723	161	123	2.65	2.2
Tweed	E.O.	1,256	5,637.58	194,331	302	54	1.56	2.9
Uxbridge	G.B.	1,527	7,996.45	350,084	397	73	1.68	2.3
Victoria Harbor	G.B.	1,092	3,023.24	90,673	208	36	1.21	3.3
Wardsville	Nia.	243	1,296.67	23,895	49	41	2.21	5.4
Warkworth	E.O.	P.V.	1,910.51	49,786	137	30	1.16	3.8
Waterdown	Nia.	885	5,067.78	332,870	238	117	1.77	1.5
Waterford	Nia.	1,238	5,806.67	350,305	348	84	1.39	1.7
Watford	Nia.	975	6,567.31	332,200	284	97	1.93	2.0
Waubaushene	G.B.	P.V.	2,808.35	127,580	204	52	1.15	2.2
Wellesley	Nia.	P.V.	2,387.29	82,406	126	55	1.58	2.9
Wellington	E.O.	907	5,837.98	266,865	316	70	1.54	2.2
West Lorne	Nia.	784	3,058.57	137,550	201	57	1.27	2.2
Westport	E.O.	710	3,380.56	72,085	106	57	2.66	4.7
Wheatley	Nia.	744	4,047.19	140,380	215	54	1.58	2.9
Wiarton	G.B.	1,743	7,875.41	238,271	391	51	1.68	3.3
Williamsburg	E.O.	P.V.	2,239.66	274,407	114	201	1.64	0.8
Winchester	E.O.	1,041	5,925.51	379,876	286	111	1.73	1.6
Windermere	G.B.	128	2,602.82	42,529	56	63	3.87	6.1
Woodbridge	Nia.	831	6,364.17	378,606	268	118	1.98	1.7
Woodville	G.B.	418	2,078.04	79,031	110	60	1.57	2.6
Wyoming	Nia.	528	2,380.59	79,700	146	45	1.36	3.0
Zurich	Nia.	P.V.	2,866.28	92,504	127	61	1.88	3.1

"D"—Concluded

in Ontario Municipalities Served by the Commission and for Power Service during the year 1938

VILLAGES AND SUBURBAN AREAS

Commercial Light service						Power service			
Revenue	Consumption	Number of consumers	Average monthly consumption	Average monthly bill	Net cost per kw-hr.	Revenue	Number of consumers	Average monthly horse-power	Total number of consumers
$ c.	kw-hr.		kw-hr.	$ c.	cents	$ c.			
813.86	25,158	33	64	2.05	3.2	906.84	3	52.0	137
10,303.41	665,621	147	377	5.84	1.5	15,149.13	17	858.0	2,017
3,168.92	139,735	92	127	2.87	2.3	1,868.09	12	154.3	368
3,299.13	149,634	83	150	3.31	2.2	1,672.84	12	76.2	391
3,340.64	125,853	83	126	3.35	2.6	964.18	5	51.7	469
1,581.23	58,394	43	113	3.06	2.7	3,133.52	4	105.0	232
1,741.17	48,645	45	90	3.22	3.6	238.44	2	10.5	162
4,420.53	145,380	86	141	4.28	3.0	976.14	3	29.3	515
1,684.69	56,000	38	123	3.69	3.0	1,160.69	5	40.9	191
2,983.94	146,774	90	136	2.76	2.0	8,503.03	8	384.6	382
2,578.69	63,492	57	93	3.77	4.1	1,337.23	5	94.8	289
1,726.57	97,521	45	180	3.19	1.8	1,801.08	7	87.7	183
2,999.10	205,866	80	214	3.12	1.5	1,603.75	7	81.5	320
2,031.97	49,631	44	94	3.85	4.1	1,629.72	3	45.6	195
854.43	23,146	24	80	2.97	3.6	798.50	2	29.9	94
546.45	9,011	12	63	3.79	6.1	268.64	2	14.4	76
7,513.75	417,680	136	255	4.60	1.8	8,178.07	12	655.9	593
14,487.09	817,761	200	340	6.04	1.8	10,408.46	29	503.9	2,483
2,343.43	39,746	47	70	4.16	5.9	473.54	6	19.5	190
782.60	30,360	3	843	21.74	2.6	595.45	8	28.1	371
....	....	.....		.....	....	....	.....	....	161
4,934.43	134,540	94	119	4.37	3.7	3,069.76	13	132.2	409
4,258.76	124,338	99	105	3.58	3.4	823.77	9	64.7	505
958.44	36,839	29	106	2.75	2.6	108.55	1	3.0	238
1,268.51	20,742	22	79	4.80	6.1	58.23	1	3.0	72
1,255.59	35,961	43	70	2.43	3.5	....	.....	....	180
1,747.35	108,540	38	238	3.83	1.6	1,302.03	7	87.4	283
2,427.05	167,290	74	188	2.73	1.5	4,799.77	12	343.7	434
2,975.68	115,513	77	125	3.22	2.6	3,140.07	5	112.1	366
692.73	31,590	23	114	2.51	2.2	772.02	4	31.9	231
1,502.02	41,994	55	64	2.28	3.6	1,276.95	4	55.4	185
2,391.24	89,752	67	112	2.97	2.7	2,170.95	6	77.8	389
1,818.82	80,174	55	121	2.75	2.3	2,405.67	9	162.4	265
3,243.79	71,794	51	117	5.30	4.5	....	.....	....	157
3,214.70	112,569	73	129	3.67	2.9	1,901.82	5	88.4	293
7,982.04	255,395	116	183	5.73	3.1	4,668.57	16	182.6	523
4,366.35	268,181	62	360	5.87	1.6	126.08	1	12.0	177
3,545.45	182,470	78	195	3.79	1.9	1,315.25	3	63.2	367
1,202.38	27,605	13	177	7.71	4.4	85.18	1	3.1	70
1,845.32	79,691	50	133	3.08	2.3	5,262.45	7	263.5	325
1,043.76	31,511	31	85	2.81	3.3	541.76	2	34.7	143
1,375.64	39,630	48	69	2.39	3.5	388.97	3	21.0	197
2,411.23	66,320	48	115	4.19	3.6	....	.....	....	175

STATEMENT "E"

Cost of Power to Municipalities and Rates to Consumers for Domestic Service—Commercial Light Service—Power Service in Ontario Urban Municipalities Served by The Hydro-Electric Power Commission

For the Year 1938

In Statement "E" are presented the rate schedules applicable to consumers for domestic service, for commercial light service and for power service in each of the co-operating municipalities receiving service at cost through The Hydro-Electric Power Commission.* The cost per horsepower of the power supplied at wholesale by the Commission to the municipality, an important factor in determining rates to consumers, is also stated.

Cost of Power to Municipalities

The figures in the first column represent the total cost for the year of the power supplied by the Commission to the municipality, divided by the number of horsepower supplied. Details respecting these costs are given in the "Cost of Power" tables relating to the several systems, as presented in Section IX, and an explanation of the items making up the cost of power is given in the introduction to that Section.

Rates to Consumers

The Power Commission Act stipulates that "The rates chargeable by any municipal corporation generating or receiving and distributing electrical power or energy shall at all times be subject to the approval and control of the Commission,"† in accordance with the Act and in pursuance of its fundamental principle of providing service at cost, the Commission requires that accurate cost records be kept in each municipality, and exercises a continuous supervision over the rates charged to consumers.

At the commencement of its operations, the Commission introduced scientifically-designed rate schedules for each of the three main classes into which the electrical service is usually divided, namely: residential or domestic service, commercial light service, and power service, and the schedules in use during the past year are presented in the tables of this statement.

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*Except townships served as parts of rural power districts, for which consult latter part of Section III.

†R.S.O. 1937, Ch. 62, Sec. 89.

Domestic Service: Domestic rates apply to electrical service in residences, for all household purposes, including lighting, cooking and the operation of all domestic appliances.

During the past two or three years most of the urban municipal utilities have further simplified the domestic rate structure by abolishing the service charge, and making a suitable adjustment in the first consumption rate. Where the service charge is retained at 33 and 66 cents gross per month the charge of 33 cents per month per service is made when the permanently installed appliance load is under 2,000 watts, and the charge of 66 cents per month when 2,000 watts or more.

Commercial Light Service: Electrical energy used in stores, offices, churches, schools, public halls and institutions, hotels, public boarding-hourses, and in all other premises for commercial purposes, including sign and display lighting, is billed at commercial lighting rates.

Water-Heater Service: For all consumers using continuous electric water heaters, low flat rates are available consisting of a fixed charge per month dependent on the capacity of the heating element and the cost of power to the municipal utility. Such heaters are so connected that the electrical energy they consume is not metered. For new installations the necessary equipment, including heater, thermostat, efficient insulation for water-storage tank, and wiring, is installed by a large number of municipal Hydro systems, without capital cost to the consumer.†

Power Service: The rate schedules given for power service in Statement "E" are those governing the supply of power at retail by each of the local municipal utilities. The average amount of power sold, per consumer, under these rates is approximately 40 horsepower—consult Statement "D". The Commission serves certain large power consumers direct on behalf of the various systems of municipalities.

The rates for power service, as given in the tables, are the rates for 24-hour unrestricted power at secondary distribution voltage. For service at primary distribution voltage the rates are usually five per cent lower than those stated. In municipalities where load conditions and other circumstances permit, lower rates are available for "restricted power," discounts additional to those listed in the table being applicable.

The service charge relates to the connected load or to the maximum demand, as measured by a 10-minute average peak, where a demand meter is installed. The prompt payment discount of 10 per cent on the total monthly bill is given for settlement within 10 days.

Under the tabulation of rates for power service there is a column headed "Basis of rate 130 hours' monthly use of demand." This column shows approximately the net annual amount payable for a demand of one horsepower, assuming a monthly use of 130 hours, which includes 30 hours' use each month at the third energy rate. Broadly, the figures in this column serve to indicate approximately the relative cost of power service in the different municipalities listed.

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†In addition, the municipal Hydro systems supply booster water-heating equipment to furnish extra requirements beyond the capacity of the continuous heater; current for the booster heater is measured and charged for at the regular rates.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1938, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c	cents		cents	cents	$ c.	%
Acton	28.34	.....	60	2.5	1.0	0.83	10
Agincourt	32.91	.....	60	3.4	1.1	1.11	10
Ailsa Craig	40.31	.....	60	3.0	0.9	0.83	10
Alexandria T	50.63	.....	60	5.2	1.2	1.11	10
Alliston	42.52	.....	40	5.3	1.3	1.39	10
Alvinston	64.09	.....	60	5.0	1.25	1.66	10
Amherstburg T	30.17	.....	60	3.4	0.9	0.83	10
Ancaster twp.	27.30	.....	60	3.8	1.3	0.83	10
Apple Hill	42.13	.....	60	5.0	1.5	1.66	10
Arkona	59.21	.....	60	5.0	1.8	1.78	10
Arthur	57.85	33–66	40	5.0	1.8	1.67	10
Athens	43.28	33–66	50	4.5	1.5	1.11	10
Aylmer T	27.57	.....	60	2.4	0.9	0.83	10
Ayr	28.12	.....	60	3.4	1.1	1.11	10
Baden	27.40	.....	60	2.5	1.0	0.83	10
Barrie T	29.81	.....	60	2.7	1.0	0.83	10
Bath	56.32	33–66	40	6.0	1.5	3.33	10
Beachville	27.20	.....	60	3.1	1.1	0.83	10
Beamsville	24.71	.....	60	3.3	1.0	0.83	10
Beaverton	35.61	.....	60	2.8	1.0	1.11	10
Beeton	55.17	.....	40	6.0	1.8	1.67	10
Belle River	31.04	.....	60	3.6	1.0	1.11	10
Belleville C	24.79	.....	55	1.9	0.7	0.83	10
Blenheim	32.75	.....	60	2.5	0.9	0.83	10
Bloomfield	44.11	.....	50	3.4	1.3	1.11	10
Blyth	42.38	.....	60	3.5	1.1	1.39	10
Bolton	33.88	.....	55	3.6	1.3	1.11	10
Bothwell	38.63	.....	60	2.4	0.8	0.83	10
Bowmanville T	30.16	.....	60	3.5	1.0	0.83	10
Bradford	46.08	.....	40	5.4	1.4	1.67	10
Brampton T	25.40	.....	60	2.3	1.0	0.83	10
Brantford C	23.49	.....	60	2.3	0.9	0.83	10
Brantford twp.	26.51	.....	60	2.9	1.0	1.11	10
Brechin	43.67	.....	45	5.5	1.2	1.67	10
Bridgeport	30.75	33–66	50	4.0	1.3	1.11	10
Brigden	50.75	.....	60	3.9	0.9	1.39	10
Brighton	30.94	.....	60	4.2	1.2	1.11	10
Brockville T	24.48	.....	60	1.8	0.8	0.83	10
Brussels	40.91	.....	50	3.8	1.1	1.39	10
Burford	27.99	.....	60	2.9	0.9	0.83	10

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*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	1.8	0.5	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.0	0.6	1.11	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.3	0.6	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	4.5	0.8	1.66	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	4.3	1.0	1.39	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	4.6	1.0	1.66	10	53.00	1.00	6.2	4.1	0.33	......	......	10
5	2.5	0.6	0.83	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	3.0	0.7	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	5.0	1.0	1.66	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	5.0	1.0	1.78	10	53.00	1.00	6.2	4.1	0.33	......	......	10
5	5.0	1.0	1.67	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	4.5	1.0	1.11	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	1.9	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.5	0.7	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.2	0.7	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.1	0.8	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	6.0	1.0	3.33	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.6	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.0	0.6	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	2.0	0.8	1.11	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	5.5	1.0	1.67	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.7	0.6	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
4.5	1.6	0.35	0.83	10	15.00	1.00	1.3	0.8	0.33	......	25	10
5	2.0	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	3.0	1.0	1.11	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	3.4	1.0	1.39	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	3.2	1.0	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.0	0.5	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	2.6	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	4.4	1.0	1.67	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	1.8	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
†5	1.6	0.35	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.3	0.6	1.11	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	4.8	0.8	1.67	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	4.0	0.7	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	3.3	0.9	1.39	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	3.6	0.8	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
4.5	1.6	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	3.3	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.0	0.6	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10

†Min. 500 watts.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1938, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Burgessville	46.43	.....	60	5.0	1.5	1.39	10
Caledonia	25.72	.....	60	2.7	0.9	0.83	10
Campbellville	48.38	.....	45	6.0	1.5	2.22	10
Cannington	39.18	.....	55	3.6	1.5	1.11	10
Cardinal	26.98	.....	55	2.5	1.1	1.11	10
Carleton Place T	26.37	.....	55	2.8	1.0	0.83	10
Cayuga	38.27	.....	60	4.2	1.3	1.39	10
Chatham C	25.26	.....	60	3.0	0.9	0.83	10
Chatsworth	36.49	.....	45	4.0	1.5	1.39	10
Chesley	33.83	.....	55	2.9	1.1	1.11	10
Chesterville	31.40	.....	55	2.3	1.0	0.83	10
Chippawa	21.07	.....	60	2.8	0.9	1.11	10
Clifford	46.97	.....	55	4.6	1.5	1.39	10
Clinton	33.17	.....	60	2.8	1.1	1.11	10
Cobden	57.57	.....	30	4.8	1.2	1.39	10
Cobourg T	29.44	.....	55	3.4	1.1	0.83	10
Colborne	32.42	.....	60	4.0	1.1	0.83	10
Coldwater	31.20	33–66	55	2.5	1.0	1.11	10
Collingwood	31.99	.....	55	3.0	1.0	0.83	10
Comber	39.07	.....	60	3.6	0.9	1.11	10
Cookstown	41.09	.....	40	5.4	1.2	1.67	10
Cottam	37.58	.....	60	3.6	1.0	1.39	10
Courtright	58.48	.....	55	6.0	1.5	1.95	10
Creemore	43.18	.....	45	4.2	1.0	1.39	10
Dashwood	37.28	.....	60	4.2	1.0	1.11	10
Delaware	30.22	.....	60	3.5	1.2	1.11	10
Delhi	35.03	.....	60	4.0	1.2	0.83	10
Deseronto	46.37	.....	50	4.8	1.2	0.83	10
Dorchester	32.62	.....	60	3.0	1.1	0.83	10
Drayton	46.32	.....	55	4.0	1.3	1.11	10
Dresden	33.73	.....	60	2.6	0.8	0.83	10
Drumbo	31.79	.....	60	3.8	1.1	1.11	10
Dublin	42.83	.....	60	5.0	1.5	1.67	10
Dundalk	34.12	.....	55	3.0	1.0	1.11	10
Dundas T	21.98	.....	60	2.5	0.9	0.83	10
Dunnville T	24.71	.....	60	2.4	0.8	0.83	10
Durham	37.26	.....	55	2.7	1.2	0.83	10
Dutton	30.31	.....	60	2.1	0.8	0.83	10
East York twp	27.71	.....	60	2.5	1.1	0.83	10
Elmira T	27.42	.....	60	3.5	1.0	0.83	10
Elmvale	35.58	.....	55	3.4	1.2	0.83	10
Elmwood	38.06	.....	45	5.0	1.2	1.39	10
Elora	29.98	.....	60	3.1	1.2	1.11	10
Embro	35.00	.....	60	3.4	1.2	1.39	10
Erieau	43.48	.....	60	3.8	1.1	1.39	10

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*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Mini mum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	4.5	1.0	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	5.8	1.0	2.22	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.8	1.0	1.11	10	33.00	1.00	3.2	2.1	0.33	......	......	10
5	2.3	1.0	1.11	10	32.00	1.00	3.1	2.0	0.33	2.78	......	10
5	2.2	0.8	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	3.8	1.0	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.3	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.0	1.0	1.39	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	2.4	0.8	1.11	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.3	1.0	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	2.0	0.6	1.11	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	4.4	1.0	1.39	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	2.4	0.7	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	4.2	1.0	1.39	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	2.7	0.9	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	3.0	1.0	0.83	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.5	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.5	0.8	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.9	0.9	1.11	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	4.5	1.0	1.67	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.8	0.9	1.39	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	5.5	1.0	1.95	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	3.4	0.9	1.39	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	3.9	0.9	1.11	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	3.0	1.0	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	3.0	1.0	0.83	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	3.8	1.0	0.83	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.2	1.0	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	3.4	0.7	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.0	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	3.0	0.8	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	5.0	1.0	1.67	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	2.5	0.8	1.11	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	1.9	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.0	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.3	0.8	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	1.8	0.4	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	3.0	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.4	1.0	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	4.2	1.0	1.39	10	33.00	1.00	3.2	2.1	0.33	......	......	10
5	2.8	0.7	1.11	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.8	0.8	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	3.6	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	2.22	....	10

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1938, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate: Number of kw-hrs. per month	First rate: Per kw-hr. per month	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
	$ c.	cents		cents	cents	$ c.	%
Erie Beach	49.19	.....	60	5.3	1.5	1.67	10
Essex	29.55	.....	60	2.6	0.9	0.83	10
Etobicoke twp.	23.47	.....	60	2.7	1.1	0.83	10
Exeter	31.88	.....	60	3.0	0.9	0.83	10
Fergus	28.28	.....	55	3.3	1.3	1.11	10
Finch	39.24	.....	45	3.0	1.2	1.66	10
Flesherton	40.56	.....	55	3.5	1.2	1.11	10
Fonthill	28.96	.....	60	3.5	1.2	1.39	10
Forest	36.71	.....	60	3.5	0.9	1.11	10
Forest Hill	24.91	33–66	60	2.0	1.3	0.83	10
Fort William C	21.57	.....	60	2.1	0.9	0.83	10
Galt C	23.71	.....	60	2.8	0.8	0.83	10
Gamebridge	.....	.....	45	5.5	1.2	1.67	10
Georgetown T	30.55	.....	60	3.0	0.9	0.83	10
Glencoe	46.05	.....	60	4.0	0.9	1.11	10
Glen Williams	.....	33–66	60	2.7	1.1	0.83	10
Goderich T	35.34	.....	55	3.3	1.0	0.83	10
Grand Valley	48.66	.....	45	5.2	1.2	1.39	10
Granton	39.56	.....	60	3.3	1.2	1.11	10
Gravenhurst	23.47	.....	55	2.2	0.9	0.83	10
Guelph C	23.38	.....	60	2.0	0.8	0.83	10
Hagersville	28.10	33–66	60	2.0	1.0	0.83	10
Hamilton C	21.03	.....	60	2.4	0.8	0.83	10
Hanover T	30.10	.....	60	3.0	1.5	0.83	10
Harriston	34.16	.....	55	3.2	1.0	1.11	10
Harrow	31.07	.....	60	3.5	1.0	0.83	10
Hastings	41.61	.....	45	4.5	1.2	1.11	10
Havelock	46.06	.....	50	4.5	1.2	0.83	10
Hensall	40.87	.....	60	3.8	1.1	1.11	10
Hespeler T	23.82	.....	60	3.0	0.9	0.83	10
Highgate	39.91	.....	60	3.2	0.9	1.11	10
Holstein	85.93	.....	40	5.5	1.5	1.67	10
Humberstone	24.31	.....	60	2.9	0.9	0.83	10
Huntsville T	27.47	.....	60	2.0	0.9	0.83	10
Ingersoll T	24.88	.....	60	2.4	0.9	0.83	10
Jarvis	34.72	.....	60	3.6	1.0	1.11	10
Kemptville	32.47	.....	55	3.5	1.2	0.83	10
Kincardine T	39.44	33–66	40	4.0	1.5	1.11	10
Kingston C	27.27	.....	50	2.2	0.8	0.83	10
Kingsville T	30.70	.....	60	2.8	0.9	0.83	10

*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs. per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	5.0	1.0	1.67	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.2	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.6	0.7	1.11	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.8	1.0	1.66	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	2.8	1.0	1.11	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.8	0.7	1.39	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	3.0	0.6	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.0	0.75	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.4	0.83	10	17.00	1.00	1.7	1.1	‡0.33 ‡‡0.133	......	25	10
5	2.3	0.4	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	4.8	0.8	1.67	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	2.0	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	3.1	1.0	1.11	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	2.8	0.75	0.83	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.7	0.6	0.83	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	4.3	1.0	1.39	10	33.00	1.00	3.2	2.1	0.33	......	......	10
5	2.6	1.0	1.11	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	1.8	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	1.6	0.3	0.83	10	14.00	1.00	1.1	0.7	0.33	......	25	10
5	2.0	0.75	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
†5	1.6	0.35	0.83	10	15.00	1.00	1.3	0.8	0.33	......	25	10
5	2.5	0.8	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.6	0.7	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.6	0.7	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	4.0	1.0	1.11	10	37.00	1.00	3.8	2.5	0.33	......	......	10
5	4.0	1.0	0.83	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	3.3	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.2	0.6	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.8	0.7	1.11	10	29.00	1.00	2.6	1.7	0.33	......	......	10
5	5.0	1.0	1.67	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	2.0	0.6	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	1.8	0.7	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	1.9	0.5	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.8	0.7	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.8	1.0	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	3.8	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	1.6	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	1.9	0.6	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10

‡Next 360 hours' use.
‡‡All additional.
†Min. 500 watts.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1938, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Kirkfield	51.23	33–66	40	6.0	2.0	2.22	10
Kitchener C	23.01	.....	60	2.2	0.8	0.83	10
Lakefield	35.04	.....	50	3.6	1.2	0.83	10
Lambeth	33.47	.....	60	3.0	1.0	1.11	10
Lanark	38.55	.....	45	5.0	1.5	0.83	10
Lancaster	56.23	.....	60	5.5	1.2	1.66	10
La Salle	31.07	.....	60	3.8	1.2	1.11	10
Leamington . . . . T	29.58	.....	60	2.4	0.8	0.83	10
Leaside	.....	*a*3	..	*b*1.8	1.5	0.83	10
Lindsay . . . . T	31.41	.....	60	2.5	0.9	0.83	10
Listowel . . . . T	29.29	.....	55	2.7	1.0	0.83	10
London C	22.71	.....	60	2.4	0.9	0.83	10
London Twp	27.00	.....	60	2.8	0.9	1.11	10
Long Branch	24.85	.....	60	2.7	1.1	0.83	10
Lucan	30.41	.....	60	3.4	1.1	1.11	10
Lucknow	46.38	33–66	45	4.2	1.5	1.67	10
Lynden	30.31	.....	60	3.4	1.1	1.39	10
Madoc	44.15	.....	50	3.2	1.2	0.83	10
Markdale	33.45	.....	55	3.3	1.1	1.11	10
Markham	30.50	.....	60	3.2	1.0	0.83	10
Marmora	34.67	.....	60	4.0	1.0	1.11	10
Martintown	38.51	.....	50	3.0	1.0	1.11	10
Maxville	44.57	.....	55	5.2	1.2	1.66	10
Meaford . . . . T	36.65	33–66	60	2.5	1.2	0.83	10
Merlin	38.29	.....	60	4.0	1.0	1.11	10
Merritton . . . . T	20.38	.....	60	2.4	0.9	0.83	10
Midland . . . . T	29.74	33–66	60	2.0	1.0	0.83	10
Mildmay	40.42	.....	40	3.6	1.0	1.39	10
Milton	28.80	.....	60	3.5	1.2	0.83	10
Milverton	29.42	.....	60	2.7	1.0	1.00	10
Mimico . . . . T	22.66	.....	60	2.7	1.1	0.83	10
Mitchell	28.18	.....	60	2.9	1.1	0.83	10
Moorefield	53.39	.....	50	4.5	1.2	1.39	10
Morrisburg	35.13	*a*3	60	2.0	1.0	0.83	10
Mount Brydges	34.30	.....	60	3.0	1.0	1.11	10
Mount Forest	40.33	.....	60	2.7	1.25	0.83	10
Napanee . . . . T	28.77	.....	50	3.5	1.2	0.83	10
Neustadt	49.84	33–66	60	6.0	2.0	1.67	10
Newbury	45.02	.....	55	5.0	1.25	1.38	10
Newcastle	33.66	33	60	5.0	1.5	1.11	10

*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

†First 50 hours' use per kw-hr. Second 50 hours' use per kw-hr.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	6.0	1.0	2.22	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	1.9	0.4	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.8	1.0	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	2.6	0.8	1.11	10	29.00	1.00	2.6	1.7	0.33	......	......	10
5	4.0	1.0	0.83	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	5.5	1.0	1.66	10	62.00	1.00	7.5	5.0	0.33	......	......	10
5	3.3	1.0	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	1.9	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
......	*c*3 & 1	1/3	0.83	10	....	*d*1.10 0.90	2.0	1.0	*e*1/3 1/6	......	......	10
5	2.2	0.7	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.3	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	1.8	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.2	0.6	1.11	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	3.0	0.6	1.11	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	4.2	1.0	1.67	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	3.0	1.0	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	3.0	0.9	0.83	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.5	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.8	0.7	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	3.6	1.0	1.11	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	3.0	1.0	1.66	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	5.0	1.0	1.66	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	2.5	0.8	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	3.4	0.9	1.11	10	30.00	1.00	2.8	1.8	0.33	2.22	......	10
5	1.7	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.0	0.9	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.8	0.8	1.39	10	34.00	1.00	3.4	2.2	0.33	......	......	10
5	2.6	0.6	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.5	0.7	1.00	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.6	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.4	0.7	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	4.0	1.0	1.39	10	44.00	1.00	4.8	3.2	0.33	......	......	10
......	4.0 † 2.0	1.0	0.83	10	....	1.00	2.0	1.5	0.50	......	......	10
5	2.3	0.6	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.2	0.9	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.8	0.75	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	6.0	1.0	1.67	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	4.5	1.0	1.38	10	47.00	1.00	5.2	3.5	0.33	......	......	10
5	5.0	1.5	1.11	10	35.00	1.00	3.5	2.3	0.33	......	......	10

*a*Service charge per 100 sq. ft.

*b*Per kw-hr. for first 3 kw-hrs. per 100 sq. ft.

*c*First 90 hours' use 3 cents per kw-hr. Next 90 hours' use 1 cent per kw-hr.

*d*First 7.5 kilowatts $1.10 per kilowatt. All additional, 90 cents per kilowatt.

*e*1/3 cent per kw-hr., next 300 hours. All additional 1/6 cent per kw-hr.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1938, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
New Hamburg	27.75	.....	60	3.3	1.1	0.83	10
New Toronto.......T	25.00	.....	60	2.4	1.0	0.83	10
Niagara Falls.......C	18.32	.....	60	2.2	0.8	0.83	10
Niagara-on-the-Lake	21.63	.....	60	2.6	1.0	0.83	10
Nipigon Twp	24.91	.....	60	3.0	1.0	1.11	10
North York Twp	27.06	.....	55	4.0	1.4	1.11	10
Norwich	28.88	.....	60	2.8	1.0	0.83	10
Norwood	34.30	.....	50	4.0	1.2	1.11	10
Oil Springs	35.91	.....	60	2.6	0.9	1.11	10
Omemee	.....	.....	60	3.5	1.3	0.83	10
Orangeville.......T	40.37	.....	55	3.2	1.0	1.11	10
Oshawa.......C	29.35	.....	50	3.8	1.1	0.83	10
Ottawa.......C	13.83	33–66	60	2.0	0.5	0.83	10
			60	1.0			
Otterville	35.24	.....	60	2.8	0.9	1.11	10
Owen Sound.......C	30.02	.....	60	2.1	0.9	0.83	10
Paisley	44.57	33–66	45	4.6	1.2	1.39	10
Palmerston	31.91	.....	60	2.9	1.1	1.11	10
Paris.......T	23.77	.....	60	2.3	0.9	0.83	10
Parkhill	47.78	.....	60	4.2	1.1	1.39	10
Penetanguishene.......T	32.51	.....	55	3.2	1.1	0.83	10
Perth.......T	25.83	.....	55	2.8	1.0	0.83	10
Peterborough.......C	25.20	.....	55	2.7	1.2	0.83	10
Petrolia.......T	32.21	.....	60	2.7	0.8	0.83	10
Picton.......T	36.56	.....	60	2.8	1.0	0.83	10
Plattsville	39.33	.....	60	4.0	1.1	1.11	10
Point Edward	30.98	.....	60	3.2	1.0	0.83	10
Port Arthur.......C	21.30	.....	50	2.0	0.8	0.83	10 & 10
Port Colborne.......T	24.02	.....	60	3.0	1.0	0.83	10
Port Credit	27.24	.....	60	2.5	1.0	0.83	10
Port Dalhousie	24.48	.....	60	2.6	1.0	0.83	10
Port Dover	29.48	.....	60	2.6	0.9	0.83	10
Port Elgin	38.59	33–66	40	2.5	1.2	1.11	10
Port Hope.......T	30.36	.....	60	2.4	0.9	0.83	10
Port McNicoll	34.96	.....	50	4.0	1.5	0.83	10
Port Perry	44.05	.....	50	4.0	1.2	1.11	10
Port Rowan	36.41	.....	60	4.0	1.3	1.67	10
Port Stanley	31.55	.....	60	3.1	1.0	0.83	10
Prescott.......T	25.02	.....	60	2.3	1.0	0.83	10
Preston.......T	23.41	.....	60	2.6	0.8	0.83	10
Priceville	43.31	33–66	60	6.0	2.0	1.67	10

*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	2.4	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	1.8	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	1.6	0.35	0.83	10	15.00	1.00	1.3	0.8	0.33	......	25	10
5	2.2	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.4	0.8	1.11	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	3.3	0.7	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.2	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	3.6	1.0	1.11	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	2.4	0.6	1.11	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	3.5	1.0	0.83	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.2	0.8	1.11	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.8	0.8	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
......	†5.0 ††2.2	0.5	0.83	10	18.00	1.00	1.8	1.2	0.15	......	15+10	10
5	2.5	0.6	1.11	10	29.00	1.00	2.6	1.7	0.33	......	......	10
5	1.9	0.7	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	4.6	1.0	1.39	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	2.4	0.9	1.11	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	1.8	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	4.0	0.9	1.39	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	2.8	0.8	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.0	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.3	0.9	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.1	0.5	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.0	0.8	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	3.5	1.0	1.11	10	32.00	1.00	3.1	2.0	0.33	2.00	......	10
5	2.4	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	1.8	0.3	0.83	10 & 10	17.00	1.00	1.7	1.1	‡0.33 0.133	......	25	10
5	2.5	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	2.0	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.0	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	2.2	0.8	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	2.5	0.8	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.2	0.6	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	3.5	1.0	0.83	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	3.2	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	3.6	1.0	1.67	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.4	0.6	0.83	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.0	0.8	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.1	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	6.0	1.0	1.67	10	40.00	1.00	4.3	2.8	0.33	......	......	10

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†First 30 hours' use per kw-hr.

††Next 70 hours' use per kw-hr.

‡0.33 cents per kw-hr for next 360 hours' use plus 0.133 cents per kw-hr for all additional.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1938, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Princeton	36.64	.....	60	3.3	1.2	1.67	10
Queenston	22.82	.....	60	3.0	1.3	1.11	10
Richmond	43.66	.....	35	5.0	1.5	1.95	10
Richmond Hill	28.42	33–66	60	2.0	0.8	0.83	10
Ridgetown	32.39	.....	60	2.3	0.8	0.83	10
Ripley	59.74	33–66	55	6.0	1.5	1.67	10
Riverside T	28.94	.....	60	3.9	1.3	0.83	10
Rockwood	32.60	.....	60	3.3	1.1	1.11	10
Rodney	40.45	.....	60	2.8	0.9	0.83	10
Rosseau	74.02	‡33	..	6.0	2.0	2.22	10
Russell	43.02	.....	55	5.0	1.2	1.39	10
St. Catharines C	20.40	.....	45–60	2.2	0.8	0.83	10
St. Clair Beach	35.02	.....	60	4.2	1.3	1.67	10
St. George	31.81	.....	60	3.2	1.1	1.11	10
St. Jacobs	26.81	.....	60	3.0	1.0	1.11	10
St. Marys T	28.88	.....	60	3.3	1.0	0.83	10
St. Thomas C	23.19	.....	60	2.4	0.8	0.83	10
Sarnia C	27.61	.....	60	2.6	0.8	0.83	10
Scarboro Twp.	25.79	.....	60	2.9	1.1	0.83	10
Seaforth	30.37	.....	60	2.9	1.1	0.83	10
Shelburne	40.03	.....	50	4.0	1.0	1.11	10
Simcoe T	24.56	.....	60	2.3	0.8	0.83	10
Smiths Falls T	23.64	.....	55	3.2	1.0	0.83	10
Southampton	37.55	.....	40	3.8	1.4	1.11	10
Springfield	41.91	.....	60	3.6	1.1	1.11	10
Stamford Twp.	18.44	.....	60	3.0	1.0	0.83	10
Stayner	34.30	.....	55	3.0	1.1	0.83	10
Stirling	26.15	.....	60	2.5	1.0	0.83	10
Stouffville	36.24	.....	60	3.2	1.1	0.83	10
Stratford C	24.93	.....	60	2.8	0.9	0.83	10
Strathroy T	26.66	.....	60	2.6	0.8	0.83	10
Streetsville	30.30	.....	55	3.8	1.0	0.83	10
Sunderland	50.45	.....	45	5.0	1.2	1.39	10
Sutton	38.31	.....	50	4.0	1.5	1.11	10
Swansea	26.35	33–66	60	2.0	1.3	0.83	10
Tara	37.88	33–66	40	4.0	1.8	1.11	10
Tavistock	28.86	.....	60	3.0	1.0	0.83	10
Tecumseh T	32.16	.....	60	4.0	1.1	1.11	10
Teeswater	45.49	.....	50	5.0	1.5	1.39	10
Thamesford	31.01	.....	60	2.7	0.9	1.11	10
Thamesville	33.29	.....	60	2.6	0.9	0.83	10
Thedford	50.74	.....	55	5.2	1.3	1.39	10
Thorndale	41.15	.....	60	4.5	1.5	1.39	10
Thornton	54.70	.....	60	6.0	1.5	1.67	10
Thorold T	21.59	.....	60	2.2	0.8	0.83	10

*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

"E"—Continued

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	3.0	1.0	1.67	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.8	1.0	1.11	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	5.0	1.0	1.95	10	55.00	1.00	6.5	4.3	0.33	......	......	10
5	2.0	0.5	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	1.8	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	6.0	1.0	1.67	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	2.9	0.7	0.83	10	25.00	1.00	2.0	1.3	0.33	......	......	10
5	2.5	0.7	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.5	0.5	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	6.0	2.0	2.22	10	58.00	1.00	6.9	4.6	0.33	......	......	10
5	4.5	1.0	1.66	10	50.00	1.00	5.7	3.8	0.33	......	......	10
†5	1.5	1/3	0.83	10	14.00	1.00	1.1	0.7	§0.33 0.16	......	25	10
5	4.3	1.0	1.67	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	2.7	0.6	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.6	0.7	1.11	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.6	0.8	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	1.7	0.3	0.83	10	15.00	1.00	1.3	0.8	0.33	......	25	10
5	1.9	0.4	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.2	0.5	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.2	0.7	0.83	10	22.00	1.00	1.9	1.3	0.33	......	10	10
5	2.5	0.9	1.11	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	1.8	0.4	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	2.0	0.6	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	3.0	0.8	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	3.0	1.0	1.11	10	34.00	1.00	3.4	2.2	0.33	......	......	10
5	2.0	0.5	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.3	0.9	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.0	1.0	0.83	10	23.00	1.00	2.1	1.4	0.33	......	10	10
5	2.7	0.7	0.83	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	2.0	0.4	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	2.6	0.7	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	4.3	1.0	1.39	10	35.00	1.00	3.5	2.3	0.33	......	......	10
5	3.7	1.0	1.11	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	2.0	0.75	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	4.0	1.0	1.11	10	42.00	1.00	4.6	3.0	0.33	......	......	10
5	2.3	0.7	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.2	0.7	1.11	10	26.00	1.00	2.2	1.4	0.33	......	......	10
5	4.0	1.0	1.39	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	2.1	0.6	1.11	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.0	0.5	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	4.8	1.0	1.39	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	3.7	0.9	1.39	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	5.5	1.0	1.67	10	40.00	1.00	4.3	2.8	0.33	......	......	10
5	1.6	0.35	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10

‡According to consumers' demand.

†Min. 500 watts.

§0.33 cents per kw-hr for next 200 hours' use, plus 0.16 cents per kw-hr for all additional.

STATEMENT

Cost of Power to Municipalities and Rates to Consumers for for the Year 1938, in Urban Municipalities

Municipality C—City T—Town (pop. 2,000 or more)	Annual cost to the Commission on the works to serve electrical energy to municipality on a horse-power basis	Domestic service					
		Service charge per month*	First rate		All add'tional per kw-hr.	Minimum gross monthly bill	Prompt payment discount
			Number of kw-hrs. per month	Per kw-hr. per month			
	$ c.	cents		cents	cents	$ c.	%
Tilbury	32.06	.....	60	2.2	0.8	0.83	10
Tillsonburg . . . T	26.72	.....	60	2.3	0.8	0.83	10
Toronto . . . C	22.62	*a*3	..	*b*1.8	1.0	0.83	10
Toronto Twp.	26.97	.....	60	3.0	1.0	1.11	10
Tottenham	65.25	.....	35	6.0	2.0	1.67	10
Trafalgar Twp. Area 1.	26.41	.....	60	3.1	1.7	‡0.83 2.22	10
Trafalgar Twp. Area 2.	27.84	.....	60	3.6	1.2	1.11	10
Trenton . . . T	23.43	.....	50	3.0	1.0	0.83	10
Tweed	46.42	.....	50	4.5	1.2	1.11	10
Uxbridge	44.73	.....	50	3.6	1.2	1.11	10
Victoria Harbour	36.16	.....	60	3.0	1.0	1.11	10
Walkerton . . . T	30.38	.....	50	3.6	1.1	1.11	10
Wallaceburg . . . T	29.26	.....	60	2.6	0.8	0.83	10
Wardsville	46.66	33–66	50	6.0	1.8	1.67	10
Warkworth	38.48	.....	50	4.0	1.2	1.11	10
Waterdown	25.54	.....	60	2.6	1.0	0.83	10
Waterford	26.25	.....	60	2.4	0.9	0.83	10
Waterloo . . . T	23.38	.....	60	2.3	0.9	0.83	10
Watford	41.36	.....	60	3.3	1.0	1.11	10
Waubaushene	32.78	.....	55	3.0	1.0	1.11	10
Welland . . . C	20.12	.....	60	2.8	0.9	0.83	10
Wellesley	40.39	.....	50	4.0	1.1	1.11	10
Wellington	35.63	33–66	50	2.5	1.25	0.83	10
West Lorne	34.52	.....	60	2.8	0.8	0.83	10
Weston . . . T	22.84	.....	60	2.4	0.9	0.83	10
Westport	52.19	.....	40	6.0	2.0	2.22	10
Wheatley	39.89	.....	60	3.6	1.0	1.11	10
Whitby . . . T	29.09	.....	60	2.8	1.0	0.83	10
Wiarton	47.76	.....	50	3.8	1.2	1.39	10
Williamsburg	27.58	.....	60	2.0	0.8	0.83	10
Winchester	29.71	.....	60	2.4	1.2	0.83	10
Windermere	47.89	†33	..	6.0	2.0	†2.22	10
Windsor . . . C	24.44	.....	60	3.3	0.9	0.83	10
Wingham	44.70	.....	50	3.4	1.1	1.11	10
Woodbridge	26.83	.....	60	3.0	1.1	0.83	10
Woodstock . . . C	23.71	.....	60	2.4	0.8	0.83	10
Woodville	52.54	.....	50	3.8	1.0	1.11	10
Wyoming	44.52	.....	60	3.3	0.9	1.11	10
York Twp.	.....	33–66	60	2.0	1.3	0.83	10
Zurich	49.44	.....	60	4.2	1.0	1.39	10

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*Where domestic service charge has not been abolished the charge is 33 cents per month per service when the permanently installed appliance load is under 2,000 watts and 66 cents per month when 2,000 watts or more.

*a*Service charge per 100 sq. ft.

*b*Per kw-hr for first 3 kw-hrs per 100 sq. ft.

*c*First 90 hours' use 3 cents per kw-hr. Next 90 hours' use 1 cent per kw-hr.

"E"—Concluded

Domestic Service—Commercial Light Service—Power Service Served by The Hydro-Electric Power Commission

Commercial Light service					Power service							
Service charge per 100 watts min. 1,000 watts	First 100 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum gross monthly bill	Prompt payment discount	Basis of rate 130 hours' monthly use of demand	Service charge per h.p. per month	First 50 hrs per month per kw-hr.	Second 50 hrs. per month per kw-hr.	All additional per kw-hr.	Minimum per h.p. per month	Local discount	Prompt payment discount
cents	cents	cents	$ c.	%	$ c.	$ c.	cents	cents	cents	$ c.	%	%
5	1.7	0.4	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	1.8	0.4	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
......	*c* 3 & 1	1/3	0.83	10	....	*d* D.C. A.C.	3.0 2.0	1.2 1.0	0.60 *e* 1/3 1/6	......	......	10
5	2.2	0.6	1.11	10	22.00	1.00	1.9	1.3	0.33	......	10	10
10	5.5	1.0	1.67	10	45.00	1.00	4.9	3.3	0.33	......	......	10
5	2.8	0.7	0.83	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.8	0.7	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.6	0.8	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	4.0	1.1	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	3.0	0.9	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.6	0.8	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.4	0.9	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.0	0.5	0.83	10	20.00	1.00	1.6	1.0	0.33	......	10	10
5	6.0	1.0	1.67	10	46.00	1.00	5.1	3.4	0.33	......	......	10
5	3.0	1.0	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.0	0.5	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	1.9	0.6	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	1.9	0.4	0.83	10	18.00	1.00	1.9	1.2	0.33	......	25	10
5	2.9	0.9	1.11	10	30.00	1.00	2.8	1.8	0.33	......	......	10
5	2.2	1.0	1.11	10	33.00	1.00	3.2	2.1	0.33	......	......	10
5	2.0	0.5	0.83	10	17.00	1.00	1.7	1.1	0.33	......	25	10
5	3.5	1.0	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	2.5	1.0	0.83	10	36.00	1.00	3.7	2.4	0.33	......	......	10
5	2.3	0.5	0.83	10	27.00	1.00	2.3	1.5	0.33	......	......	10
5	1.6	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	6.0	1.0	2.22	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	3.2	0.9	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.3	0.6	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	3.8	0.8	1.39	10	38.00	1.00	4.0	2.6	0.33	......	......	10
5	2.0	0.8	0.83	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.0	0.8	0.83	10	24.00	1.00	2.3	1.5	0.33	......	10	10
5	6.0	2.0	†2.22	10	50.00	1.00	5.7	3.8	0.33	......	......	10
5	2.4	0.6	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	2.8	0.8	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.4	0.6	0.83	10	19.00	1.00	2.0	1.4	0.33	......	25	10
5	1.8	0.4	0.83	10	16.00	1.00	1.5	0.9	0.33	......	25	10
5	2.8	0.8	1.11	10	28.00	1.00	2.5	1.6	0.33	......	......	10
5	3.0	0.8	1.11	10	32.00	1.00	3.1	2.0	0.33	......	......	10
5	2.0	0.75	0.83	10	21.00	1.00	1.8	1.1	0.33	......	10	10
5	3.9	0.9	1.39	10	42.00	1.00	4.6	3.0	0.33	2.77	......	10

*d*D.C. service charge $1.50 per kw per month for first 7½ kw, plus $1.05 per kw for al additional demand.

A.C. service charge $1.10 per kw per month for first 7½ kw, plus $0.90 per kw for all additional demand.

*e*1/3 cent per kw-hr for next 300 hours' use, plus 1/6 cent per kw-hr for all additional.

‡Over 10 kilowatt.

†According to consumers' demand.

APPENDIX I

ACTS

CHAPTER 27

An Act to validate certain Contracts entered into by The Hydro-Electric Power Commission of Ontario

Assented to April 8th, 1938.
Session Prorogued April 8th, 1938.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as *The Power Contracts Validation Act, 1938.* **Short title.**

2. Notwithstanding anything contained in *The Power Commission Act, 1935,* or any other Act of this Legislature,— **1935, c. 53. Contracts declared legal and valid.**

(*a*) the contract between The Hydro-Electric Power Commission of Ontario and Gatineau Power Company and Gatineau Transmission Company dated the 14th day of December, 1937, relating to the sale to The Hydro-Electric Power Commission of Ontario of electrical power and energy with a periodicity of sixty (60) cycles per second set out in Schedule A hereto;

(*b*) the contract between The Hydro-Electric Power Commission of Ontario and Gatineau Power Company dated the 28th day of December, 1927, being the first of the two contracts set out in Schedule B to *The Power Commission Act, 1935,* as varied by the contract referred to in clause *a* hereof

(*c*) the contract between The Hydro-Electric Power Commission of Ontario and Gatineau Power Company and Gatineau Transmission Company dated the 14th day of December, 1937, relating to the sale to The Hydro-Electric

Power Commission of Ontario of electrical power and energy with a periodicity of twenty-five (25) cycles per second set out in Schedule B hereto;

(*d*) the contract between The Hydro-Electric Power Commission of Ontario and Gatineau Power Company dated the 19th day of May, 1926, being the first of the six contracts set out in Schedule A to *The Power Commission Act, 1935*, as varied by the contract referred to in clause *c* hereof;

(*e*) the contract between The Hydro-Electric Power Commission of Ontario, Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company Limited dated the 14th day of December, 1937, set out in Schedule C hereto;

(*f*) the contract between The Hydro-Electric Power Commission of Ontario and Beauharnois Light, Heat and Power Company dated the 29th day of November, 1929, set out in Schedule C to *The Power Commission Act, 1935*, as varied by the contract referred to in clause *e* hereof;

(*g*) the contract between The Hydro-Electric Power Commission of Ontario, Maclaren-Quebec Power Company and The James Maclaren Company Limited, dated the 14th day of December, 1937, set out in Schedule D hereto; and

(*h*) the contract between The Hydro-Electric Power Commission of Ontario and The James Maclaren Company Limited dated the 20th day of December, 1930, being the first of the two contracts set out in Schedule E to *The Power Commission Act, 1935*, as varied by the contract referred to in clause *g* hereof;

and hereby ratified, confirmed and declared to be legal and valid.

Effect of certain Acts.

3. It is hereby declared that the rights of Gatineau Power Company and Gatineau Transmission Company under or arising out of the contract referred to in clause *a* of section 2 or the contract dated 28th December, 1927, referred to in clause *b* of section 2 as varied by the contract referred to in clause *a* of section 2, the rights of Gatineau Power Company and Gatineau Transmission Company under or arising out of the contract referred to in clause *c* of section 2 or the contract dated 19th of May, 1926, referred to in clause *d* of section 2 as varied by the contract referred to in clause *c* of section 2, the rights of Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company Limited under or arising out of the contract referred to in clause *e* of section 2 or the contract dated 29th November, 1929, referred to in clause *f* of section 2 as varied by the contract referred to in clause *e* of section 2, and the rights of Maclaren-Quebec Power Company and The James Maclaren Company Limited or either of them, under or arising out of the contract referred to in clause *g* of section 2 or the contract dated 20th December, 1930, referred to in clause *h* of section 2 as varied by the contract referred to in clause *g* of section 2, shall in no way be limited or affected by anything contained in *The Power Commission Act, 1935, The Power Commission Amendment Act, 1937,* now contained in subsections 6, 7, 8 and 9 of section 6 of *The Power Commission Act, The Power Commission Declaratory Act, 1937,* or *The Privy Council Appeals Amendment Act, 1937,* of which section 2 is now contained in section 12 of *The Privy Council Appeals Act.*

4. This Act shall come into force on the day upon which it receives the Royal Assent. Commencement of Act.

SCHEDULE "A"

THIS AGREEMENT dated this Fourteenth day of December, A.D. 1937,

BY AND BETWEEN:

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO,
hereinafter called the "Commission"

GATINEAU POWER COMPANY, a Quebec Corporation,
hereinafter called the "Power Company"

—and—

GATINEAU TRANSMISSION COMPANY, a Dominion Corporation,
hereinafter called the "Transmission Company"

WHEREAS the Commission and the Power Company heretofore executed an Indenture dated the 28th day of December, 1927 (hereinafter called the "Original 60 Cycle Contract"), relating to the delivery by the Power Company to the Commission of electrical power and energy with a periodicity of sixty (60) cycles per second upon terms set forth in said Indenture, and said parties executed another Indenture dated the same date supplementary to the first mentioned Indenture (hereinafter called the "Supplementary Agreement");

AND WHEREAS the Commission, the Power Company and the Transmission Company heretofore executed an Indenture dated the 8th day of February, 1936 (hereinafter called the "1936 60 Cycle Contract"), relating to the sale by the Power Company and delivery by the Transmission Company to the Commission of electrical power and energy with a periodicity of sixty (60) cycles per second upon terms set forth in said Indenture;

AND WHEREAS the parties desire to enter into this Agreement;

NOW THEREFORE THIS AGREEMENT WITNESSETH, that for the considerations herein contained the parties hereto covenant, promise and agree as follows:

1. (*a*) Subject to the provisions of Clause 1 (*b*), this Agreement shall be effective on and from the first day of December, 1937, and shall terminate on and from the first day of May, 1938, unless prior to said date the Legisltaure of the Province of Ontario shall have passed the Act provided for in Clause 1 (*c*) of this Agreement, and further, notwithstanding the passing of the said Act prior to said date, shall terminate on and from the first day of August 1938, if (i) prior to the fifteenth day of July 1938, the Contracts of even date herewith between the Commission, Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company Limited, and between the Commission, Maclaren-Quebec Power Company and The James Maclaren Company Limited have not become fully and unconditionally effective, and (ii) prior to the said first day of August 1938, the Power Company and the Transmission Company shall have given notice in writing to the Commission that this Agreement shall terminate;

1. (*b*) So long as this Agreement is subject to termination under the provisions of Clause 1 (*a*), the rights of the parties respectively under any other contract or contracts shall not be released or in any way affected by this Agreement, save during the period from the first day of December 1937 to the first day of May 1938, or the first day of August 1938, as the case may be, and in case this Agreement is terminated under the provisions of Clause 1 (*a*) the parties hereto shall revert as from the date on which this Agreement so terminates to their respective positions as though this Agreement had not been entered into, and all accounts between the parties for anything arising out of this Agreement shall be settled as of the date on which this Agreement so terminates;

1. (*c*) The Commission shall apply to the Legislature of the Province of Ontario at its session to be held first after the first day of January 1938 for an Act to ratify and confirm this Agreement and the Original 60 Cycle Contract as amended hereby and declaring that the rights of the Power Company and of the Transmission Company under or arising out of this Agreement or the Original 60 Cycle Contract as amended hereby shall in no way be limited or affected by anything contained in The Power Commission Act 1935, The Power Commission Amendment Act 1937, The Power Commission Declaratory Act 1937, or The Privy Council Appeals Amendment Act 1937, all Acts of the said Legislature.

2. Subject to the provisions of Clause 1 of this Agreement, (*a*) the Commission hereby releases the Power Company, and the Power Company hereby releases the Commission, from any and all claims under or in connection with the Original 60 Cycle Contract and the Supplementary Agreement in respect of any matters prior to the first day of December 1937 and (*b*) the Commission hereby releases the Power Company and the Transmission Company, and the Power Company and the Transmission Company hereby release the Commission, from any and all claims under or in connection with the 1936 60 Cycle Contract which have heretofore arisen or may hereafter arise.

3. Subject to the provisions of Clause 1 of this Agreement, the Original 60 Cycle Contract and the Supplementary Agreement are hereby amended by—

(i) striking out all the provisions of the Supplementary Agreement;

(ii) calling Gatineau Power Company the "Power Company" instead of "the Company" and referring to it as the "Power Company" in, and adding the Transmission Company as a party to and referring to it as the "Transmission Company" in, the Original 60 Cycle Contract;

(iii) striking out the third recital in the Original 60 Cycle Contract and substituting therefor the following:

> "And whereas the Power Company is prepared to deliver to the Transmission Company for transmission and delivery to the Commission and the Transmission Company is prepared to deliver to the Commission at the point hereinafter provided electrical power and energy from the Power Company's developments on the Gatineau River and elsewhere in the Province of Quebec, and the Power Company and the Transmission Company are willing to enter into an agreement with the Commission for such purpose;"

(iv) striking out Clauses 1 to 15 both inclusive of the Original 60 Cycle Contract and substituting therefor Clauses 1 to 16 both inclusive set out in the 1936 60 Cycle Contract but with and subject to the following amendments thereto:

(A) Clause 3 (*a*) set out in the 1936 60 Cycle Contract is amended by adding thereto the following:—

> "Provided, however, that if at any time or times hereafter subsequent to the 30th day of September, 1945, during the term of this Agreement a higher rate is paid by the Commission, directly or indirectly to any other corporation or person for electrical power (from water) generated in the Province of Quebec, or from Quebec water in the Ottawa River, or by virtue of Quebec water rights in the Ottawa River, for use in the Commission's Eastern Ontario System, then the rate payable under this Agreement during any such time shall be such higher rate; The Power Company and the Transmission Company acknowledge that the Commission has communicated to them the terms of the Commission's contracts with:—
>
> (*a*) Maclaren-Quebec Power Company and The James Maclaren Company Limited dated 14th December 1937 together with the contract amended thereby, viz., the contract dated 20th December 1930 between the Commission and the said The James Maclaren Company Limited, the contract dated 14th January 1931 between the Commission, the said The James Maclaren Company Limited and the said Maclaren-Quebec Power Company, and the contract dated 1st February 1936 between the Commission, the said Maclaren-Quebec Power Company and the said The James Maclaren Company Limited;
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> (*b*) Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company Limited dated 14th December 1937 together with the contract dated 29th November 1929 between the Commission and the said Beauharnois Light, Heat and Power Company amended thereby; and
>
> (*c*) Ottawa Valley Power Company dated 4th February 1937 together with the following two contracts amended thereby, viz., the "Power Contract" dated 15th February 1930 between the Commission and Chats Falls Power Company (the former name of said Ottawa Valley Power Company) and the so-called "Operating Agreement" dated 24th February 1931 between the Commission and said Ottawa Valley Power Company;

and it is agreed that the carrying out and performance by the Commission of the terms (other than terms to the same effect as the foregoing proviso) of any of the said contracts dated earlier than a date in 1937 as so amended respectively by the said contracts dated in 1937 and/or of the said contract dated 1st February 1936 between the Commission the said Maclaren-Quebec Power Company and the said The James Maclaren Company Limited shall not be deemed to constitute payment directly or indirectly by the Commission of a higher rate within the meaning of the foregoing proviso;"

(B) Clause 3 (*j*) set out in the 1936 60 Cycle Contract is struck out;

(C) Clause 4 (*a*) set out in the 1936 60 Cycle Contract is amended by inserting after the word "defined" in the first paragraph thereof the words "and determined" and by striking out the second and third paragraphs thereof and substituting therefor the following:

"(1) The Contract Demand shall be Forty-two Thousand horsepower (42,000 h.p.) from the first day of December 1937 to the thirtieth day of September 1938, except that at any time and from time to time by written order, but not otherwise, given by the Commission to the Power Company the said amount of Forty-two Thousand horsepower (42,000 h.p.) may be increased up to but not in excess of Sixty Thousand horsepower (60,000 h.p.) to take effect as the Contract Demand from the day specified in such written order and to continue throughout the remainder of the term of this Agreement unless and until increased pursuant to the provisions of paragraph (2) next following;

(2) The Contract Demand shall be Sixty Thousand Horsepower (60,000 h.p.) from the first day of October 1938 and shall continue at Sixty Thousand horsepower (60,000 h.p.) throughout the remainder of the term of this Agreement;"

and by inserting "(3)" as the number of the fourth paragraph of the said Clause 4 (*a*) as it appears in the 1936 60 Cycle Contract and by striking out the last paragraph of the said Clause 4 (*a*);

(D) Clause 14 set out in the 1936 60 Cycle Contract is struck out and the following substituted therefor:—

"This Agreement shall continue in force to and including the 30th day of November 1970 and shall bind and enure to the benefit of the respective successors of the parties;"

4. Subject to the provisions of Clause 1 of this Agreement, the Original 60 Cycle Contract as hereby amended is hereby ratified and confirmed and shall continue to be in full force and effect.

5. Subject to the provisions of Clause 1 of this Agreement, execution of this Agreement by the Transmission Company shall for all purposes be deemed to be the execution by it of the Original 60 Cycle Contract subject to the terms of this Agreement and with the amendments herein contained.

In Witness Whereof the parties hereto have caused this Agreement to be executed under their corporate seals and the hands of their duly authorized officers:

Signed, Sealed and Delivered
In the presence of
W. George Hanna
(COMMISSION SEAL)

The Hydro-Electric Power Commission of Ontario
(Sgd.) T. H. Hogg,
Chairman.
(Sgd.) R. T. Jeffery,
Acting Secretary and Controller.

Glyn Osler.
(POWER COMPANY SEAL)

Gatineau Power Company.
(Sgd.) G. Gordon Gale,
President.
(Sgd.) J. R. Binks,
Secretary.

Glyn Osler.
(TRANSMISSION CO. SEAL)

Gatineau Transmission Company.
(Sgd.) G. Gordon Gale,
President.
(Sgd.) J. R. Binks,
Secretary.

14—H.E.

SCHEDULE "B"

THIS AGREEMENT dated this Fourteenth day of December, A.D. 1937:

BY AND BETWEEN:

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
(hereinafter called the "Commission")

GATINEAU POWER COMPANY, a Quebec Corporation
(hereinafter called the "Power Company")

—and—

GATINEAU TRANSMISSION COMPANY, a Dominion Corporation
(hereinafter called the "Transmission Company")

WHEREAS the Commisson and the Power Company heretofore executed an Indenture dated the 19th day of May 1926 (hereinafter called the "Original 25 Cycle Contract") relating to the delivery by the Power Company to the Commission of electrical power and energy with a periodicity of twenty-five (25) cycles per second upon terms set forth in said Indenture, and said parties executed five (5) other Indentures supplementary to the first mentioned Indenture (hereinafter collectively called the "Supplementary Agreements");

AND WHEREAS the Commission, the Power Company and the Transmission Company heretofore executed an Indenture dated the 8th day of February 1936 (hereinafter called the "1936 25 Cycle Contract") relating to the sale by the Power Company and delivery by the Transmission Company to the Commission of electrical power and energy with a periodicity of twenty-five (25) cycles per second upon terms set forth in said Indenture;

AND WHEREAS the parties desire to enter into this Agreement;

NOW THEREFORE THIS AGREEMENT WITNESSETH that for the considerations herein contained the parties hereto covenant, promise and agree as follows:—

1. (*a*) Subject to the provisions of Clause 1 (*b*) this Agreement shall be effective on and from the 1st day of December 1937, and shall terminate on and from the 1st day of May 1938, unless prior to said date the Legislature of the Province of Ontario shall have passed the Act provided for in Clause 1 (*c*) of this Agreement, and further, notwithstanding the passing of the said Act prior to said date, shall terminate on and from the 1st day of August 1938, if (i) prior to the 15th day of July 1938, the Contracts of even date herewith between the Commission, Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company Limited, and between the Commission, Maclaren-Quebec Power Company and The James Maclaren Company Limited have not become fully and unconditionally effective, and (ii) prior to the said first day of August 1938, the Power Company and the Transmission Company shall have given notice in writing to the Commission that this Agreement shall terminate;

1. (*b*) So long as this Agreement is subject to termination under the provisions of Clause 1 (*a*), the rights of the parties respectively under any other contract or contracts shall not be released or in any way affected by this Agreement save during the period from the 1st day of December 1937 to the 1st day of May 1938, or the 1st day of August 1938, as the case may be, and in case this Agreement is terminated under the provisions of Clause 1 (*a*) the parties hereto shall revert as from the date on which this Agreement so terminates to their respective positions as though this Agreement had not been entered into, and all accounts between the parties for anything arising out of this Agreement shall be settled as of the date on which this Agreement so terminates;

1. (*c*) The Commission shall apply to the Legislature of the Province of Ontario at its session to be held first after the 1st day of January 1938 for an Act to ratify and confirm this Agreement and the Original 25 Cycle Contract as amended hereby and declaring that the rights of the Power Company and of the Transmission Company under or arising out of this Agreement or the Original 25 Cycle Contract as amended hereby shall in no way be limited or affected by anything contained in The Power Commission Act 1935, The Power Commission Amendment Act 1937, The Power Commission Declaratory Act 1937, or The Privy Council Appeals Amendment Act 1937, all Acts of the said Legislature:

2. Subject to the provisions of Clause 1 of this Agreement, (*a*) the Commission hereby releases the Power Company, and the Power Company hereby releases the Commission, from any

and all claims under or in connection with the Original 25 Cycle Contract and the Supplementary Agreements in respect of any matters prior to the first day of December 1937 and (*b*) the Commission hereby releases the Power Company and the Transmission Company, and the Power Company and the Transmission Company hereby release the Commission, from any and all claims under or in connection with the 1936 25 Cycle Contract which have heretofore arisen or may hereafter arise:

3. Subject to the provisions of Clause 1 of this Agreement, the Original 25 Cycle Contract and the Supplementary Agreements are hereby amended by—

(i) Striking out all the provisions of the Supplementary Agreements;

(ii) Calling Gatineau Power Company the "Power Company" instead of "the Company" and referring to it as the "Power Company" in, and adding the Transmission Company as a party to, and referring to it as the "Transmission Company" in, the Original 25 Cycle Contract;

(iii) Striking out the third recital of the Original 25 Cycle Contract and substituting therefor the following:—

> "And Whereas the Power Company is prepared to deliver to the Transmission Company for transmission and delivery to the Commission and the Transmission Company is prepared to deliver to the Commission at the point hereinafter provided, electrical power and energy from the Power Company's developments on the Gatineau River in the Province of Quebec, and the Power Company and the Transmission Company are willing to enter into an agreement with the Commission for such purpose;" and

(iv) Striking out Clauses 1 to 12 both inclusive of the Original 25 Cycle Contract and substituting therefor Clauses 1 to 16 both inclusive set out in the 1936 25 Cycle Contract but with and subject to the following amendments thereto:—

(A) Clause 3 (*a*) set out in the 1936 25 Cycle Contract is amended by adding thereto the following:—

> "Provided, however, that if at any time or times hereafter subsequent to the 30th day of September, 1945, during the term of this Agreement a higher rate is paid by the Commission, directly or indirectly to any other corporation or person for electrical power (from water) generated in the Province of Quebec, or from Quebec water in the Ottawa River or by virtue of Quebec water rights in the Ottawa River, for use in the Commission's Niagara System, then the rate payable under this Agreement during any such time shall be such higher rate; the Power Company and the Transmission Company acknowledge that the Commission has communicated to them the terms of the Commission's contracts with:—
>
> (*a*) Maclaren-Quebec Power Company and The James Maclaren Company Limited dated 14th December 1937 together with the contract amended thereby, viz., the contract dated 20th December 1930 between the Commission and the said The James Maclaren Company Limited, the contract dated 14th January 1931 between the Commission, the said The James Maclaren Company Limited and the said Maclaren-Quebec Power Company and the contract dated 1st February 1936 between the Commission, the said Maclaren-Quebec Power Company and the said The James Maclaren Company Limited;
>
> (*b*) Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company Limited dated 14th December 1937 together with the contract dated 29th November 1929 between the Commission and the said Beauharnois Light, Heat and Power Company amended thereby; and
>
> (*c*) Ottawa Valley Power Company dated 4th February 1937 together with the following two contracts amended thereby, viz., the "Power Contract" dated 15th February 1930 between the Commission and Chats Falls Power Company (the former name of said Ottawa Valley Power Company) and the so-called "Operating Agreement" dated 24th February 1931 between the Commission and said Ottawa Valley Power Company;
>
> and it is agreed that the carrying out and performance by the Commission of the terms (other than terms to the same effect as the foregoing proviso) of any of the said contracts dated earlier than a date in 1937 as so amended respectively by the said contracts dated in 1937 and/or of the said contract dated 1st February 1936 between the Commission, the said Maclaren-Quebec Power Company and the said The James Maclaren Company Limited, shall not be deemed to constitute payment directly or indirectly by the Commission of a higher rate within the meaning of the foregoing proviso;"

(B) Clause 3 (*j*) set out in the 1936 25 Cycle Contract is struck out;

(C) Clause 4 (*a*) set out in the 1936 25 Cycle Contract is amended by inserting after the word "defined" in the first paragraph thereof the words "and determined" and by striking out the second, third and fourth paragraphs thereof and substituting therefor the following:—

"(1) The Contract Demand shall be One Hundred and Sixty-five Thousand horsepower (165,000 h.p.) from the First day of December 1937 to the 31st day of October 1938, except that at any time and from time to time by written order, but not otherwise, given by the Commission to the Power Company the said amount of One Hundred and Sixty-five Thousand Horsepower (165,000 h.p.) may be increased up to but not in excess of Two Hundred and Sixty Thousand Horsepower (260,000 h.p.) to take effect as the Contract Demand from the day specified in such written order and to continue throughout the remainder of the term of this Agreement unless and until increased pursuant to the provisions of paragraph (2) or paragraph (3) next following:

(2) The Contract Demand shall be Two Hundred Thousand horsepower (200,000 h.p.) (or such greater amount as the Commission may have ordered pursuant to the provisions of paragraph (1) next above) from the first day of November 1938 to the 31st day of October 1939, except that at any time and from time to time by written order, but not otherwise, given by the Commission to the Power Company the said amount of Two Hundred Thousand horsepower (200,000 h.p.) (or such greater amount as the Commission may have ordered pursuant to the provisions of paragraph (1) next above) may be increased up to but not in excess of Two Hundred and Sixty Thousand horsepower (260,000 h.p.) to take effect as the Contract Demand from the day specified in such written order and to continue throughout the remainder of the term of this agreement unless and until increased pursuant to the provisions of paragraph (3) next following:

(3) The Contract Demand shall be Two Hundred and Sixty Thousand horsepower (260,000 h.p.) from the 1st day of November 1939 and shall continue at Two Hundred and Sixty Thousand horsepower (260,000 h.p.) throughout the remainder of the term of this Agreement;"

and by inserting "(4)" as the number of the last paragraph of the said Clause 4 (*a*) as it appears in the 1936 25 Cycle Contract;

(D) Clause 14 set out in the 1936 25 Cycle Contract is struck out and the following substituted therefor:—

"This Agreement shall continue in force to and including the 30th day of November 1970, and shall bind and enure to the benefit of the respective successors of the parties."

4. Subject to the provisions of Clause 1 of this Agreement, the Original 25 Cycle Contract as hereby amended is hereby ratified and confirmed and shall continue to be in full force and effect:

5. Subject to the provisions of Clause 1 of this Agreement, execution of this Agreement by the Transmission Company shall for all purposes be deemed to be the execution by it of the Original 25 Cycle Contract subject to the terms of this Agreement and with the amendments herein contained:

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed under their corporate seals and the hands of their duly authorized officers.

SIGNED, SEALED AND DELIVERED In the presence of W. GEORGE HANNA (COMMISSION SEAL)	THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO (Sgd.) T. H. HOGG, *Chairman.* (Sgd.) R. T. JEFFERY, *Act. Secretary and Controller.*
GLYN OSLER. (POWER COMPANY SEAL)	GATINEAU POWER COMPANY. (Sgd.) G. GORDON GALE, *President.* (Sgd.) J. R. BINKS, *Secretary.*
GLYN OSLER. (TRANSMISSION CO. SEAL)	GATINEAU TRANSMISSION COMPANY. (Sgd.) G. GORDON GALE, *President.* (Sgd.) J. R. BINKS, *Secretary.*

SCHEDULE "C"

THIS AGREEMENT made this Fourteenth day of December A.D. 1937,

BETWEEN:

THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
hereinafter called the "Commission"

OF THE FIRST PART

BEAUHARNOIS LIGHT, HEAT AND POWER COMPANY,
a Quebec Corporation, hereinafter called the "Power Company"

OF THE SECOND PART

—and—

COTEAU RAPIDS TRANSMISSION COMPANY LIMITED,
a Dominion Corporation, hereinafter called the "Transmission Company"

OF THE THIRD PART.

WHEREAS the Commission and the Power Company heretofore executed an Agreement dated the 29th day of November 1929, (hereinafter called the "Power Contract") relating to the delivery to the Commission by the Power Company (therein called the "Company") of electrical power and energy upon the terms set forth in the said Power Contract;

AND WHEREAS the Transmission Company is incorporated under the provisions of The Companies Act (Canada) with power to transmit electrical power and energy;

AND WHEREAS the parties hereto have mutually agreed to certain modifications of the Power Contract;

NOW THEREFORE THIS AGREEMENT WITNESSETH that for the considerations contained herein, the parties hereto agree as follows:

1. The Power Contract is hereby amended as follows:

(*a*) Clauses 1 (*a*), 1 (*b*) and 1 (*c*) are amended by striking out the words "and thereafter so long as this agreement shall continue in force" and substituting therefor the words "until the thirty-first day of October 1935," and Clause 1 (*c*) is further amended by striking out the words "until such contract demand is increased as provided in sub-clause (*d*) next following" and substituting therefor the words "until the thirty-first day of October 1935."

(*b*) Clauses 1 (*d*), 1 (*e*) and 1 (*f*) are struck out and the following substituted therefor as clause 1 (*d*):

"To keep available for delivery to the Commission and to deliver to the Commission, from time to time, when and as required by the Commission, commencing on the Fourteenth day of December 1937 and thereafter so long as this agreement shall remain in force, the hereinafter mentioned quantities of electrical power and energy on the conditions herein contained: A minimum of one hundred and twenty-five thousand horsepower (125,000 h.p.) which shall constitute the minimum contract demand until such minimum contract demand is increased; the said minimum contract demand shall be increased as follows:—

On or before the first day of November 1938, to a minimum amount of one hundred and fifty thousand horsepower (150,000 h.p.);

On or before the first day of November 1941, to a minimum amount of two hundred thousand horsepower (200,000 h.p.);

On or before the first day of November 1942, to a minimum amount of two hundred and twenty-five thousand horsepower (225,000 h.p.);
and—

On or before the first day of November 1943, to a minimum amount of two hundred and fifty thousand horsepower (250,000 h.p.).

The respective progressively increasing minimum amounts of horsepower hereinbefore mentioned shall constitute the respective minimum contract demands until a minimum amount of two hundred and fifty thousand horsepower (250,000 h.p.) has been reached, which last mentioned amount of horsepower shall constitute the maximum contract demand during the term of this agreement; provided however that should the minimum amounts of horsepower hereinbefore mentioned or any of them be at any time or from time to time increased by the Commission by order in writing the minimum contract demand or contract demands, as the case may be, shall be increased by a corresponding amount or amounts up to a maximum of two hundred and fifty thousand horsepower (250,000 h.p.) and shall not be thereafter decreased; the respective minimum contract demands shall not be increased before the dates above set out, except upon order in writing by the Commission."

(*c*) Clause 2 (*c*) is amended by striking out the words "Eighty-five per cent (85%)" and substituting therefor the words "Seventy-five per cent (75%)," and by striking out the words "One Hundred and Six and Fifty-three Hundredths Kilowatt-hours (106.53 kw.h.)" and substituting therefor the words "Ninety-four Kilowatt-hours (94 kw.h.)."

(*d*) Clause 3 (*a*) is amended by striking out the words "to 1st October 1935" following the words "1st October 1934," and substituting therefor the words "to 31st October 1935," and by striking out the words "Two Hundred and Forty-five Thousand Dollars ($245,000.00) per month from 1st October 1935 to 1st October 1936; Three Hundred and Twelve Thousand Five Hundred Dollars ($312,500.00) per month from 1st October 1936 and thereafter so long as this agreement shall continue in force; the amount of dollars per month is obtained by multiplying the amount of the then contract demand as determined in Clause 1 hereof, by one and one-quarter (1¼)" and substituting therefor the words:—

"To pay to the Company in monthly payments subsequent to January first 1938, for all power and energy under this contract, an amount in dollars per month obtained by multiplying the amount of the contract demand established from time to time under clause 1 of this Contract, by twenty-five twenty-fourths (25/24ths) which is at the rate of twelve dollars and fifty cents ($12.50) per annum per horsepower of contract demand; provided, however, that such monthly payments shall not at any time or times be less than the amount in dollars obtained by multiplying the minimum contract demand, as determined from time to time in Clause 1 hereof, by twenty-five twenty-fourths (25/24ths); and provided also that the Commission shall pay to the Company for electrical power and energy kept available for delivery and delivered to the Commission from Fourteenth day of December 1937 to the first day of January 1938, eighteen thirty firsts (18/31sts) of twenty-five twenty-fourths (25/24ths) of the contract demand as determined under Clause 1 hereof," and by adding at the end of Clause 3 (*a*) the following words:

"Provided, however, that if at any time or times hereafter subsequent to the 30th day of September 1945, during the term of this Contract, a higher rate is paid by The Hydro-Electric Power Commission of Ontario, directly or indirectly, to any other corporation or person for electrical power (from water) generated in the Province of Quebec, or from Quebec water in the Ottawa River or by virtue of Quebec water rights in the Ottawa River, for use in the Niagara System, then the rate payable under this Contract during any such time shall be such higher rate; the Power Company and the Transmission Company acknowledge that the Commission has communicated to them the terms of the Commission's contracts with (*a*) Gatineau Power Company and Gatineau Transmission Company, (*b*) Maclaren-Quebec Power Company and The James Maclaren Company Limited, all dated 14th day of December 1937 together with the several earlier contracts amended thereby and the 1936 contracts with the said Companies, and (*c*) the Commission's contract with Ottawa Valley Power Company dated 4th February 1937 together with the earlier contracts with said Company amended thereby, and it is agreed that the carrying out and performance by the Commission of the terms of any of the said earlier contracts as so amended respectively by agreements made in 1937 and/or of the said 1936 contracts with the said Gatineau Companies and with the said Maclaren Companies shall not be deemed to constitute payment directly or indirectly by the Commission of a higher rate within the meaning of this proviso;"

(*e*) Clause 3 (*b*) is amended by striking out the words and figures "Six per cent (6%)" and substituting therefor "Five per cent (5%)";

(*f*) Clause 3 (*d*) is amended by striking out the words "clauses 1 (*a*), 1 (*b*), 1 (*c*), 1 (*d*), 1 (*e*) and 1 (*f*)" and substituting therefor the words "Clause 1";

(*g*) Clause 5 (*e*) is amended by striking out the figures "106.53" and substituting therefor the figures "94," and by striking out the words "eighty-five per cent (85%)" and substituting therefor the words "seventy-five per cent (75%);"

(*h*) Clause 9 is struck out and the following substituted therefor: "The rates to be paid and payments to be made by the Commission as set out in Clause 3 shall (except as to any taxes imposed by the Province of Ontario) include all compensation to the Company for all taxes, levies, rentals, royalties, license fees and charges that may be levied, assessed or imposed by the Dominion, Provincial or Municipal or any other authority for or during the term of this agreement or any part thereof";

(*i*) Clause 10 is struck out and the following substituted therefor: "This Agreement shall be binding upon both parties hereto upon its execution and shall continue in force beginning on the first day of October 1932 and extending until November 1st 1976; this Agreement may be extended up to June 23rd, A.D. 2003, upon mutual agreement of the parties hereto";

2. The Transmission Company by these presents takes cognizance of the obligations of the Power Company under the Power Contract as amended by this agreement and, with the consent of the Power Company, hereby covenants and agrees with the Commission to receive from the Power Company at the exterior face of the wall of the power house of the Power Company and to transmit over its transmission line and/or lines and to deliver to the Commission when and as required by the Commission the electrical power and energy covered by the Power Contract as so amended upon and subject to the terms thereof;

3. The Transmission Company covenants and agrees that it will maintain in efficient operating condition the existing transmission line and facilities incidental thereto, and to provide as and when required and thereafter maintain in efficient operating condition, a second transmission line of the same design and capacity and running between the same points as the existing transmission line;

4. The Power Company covenants and agrees that the Transmission Company which is a wholly owned subsidiary will fulfil its obligations to the Commission under this agreement and that it will duly provide and make available the electrical power and energy required to enable the covenants of the Transmission Company to be duly fulfilled but nothing in this clause or in clauses 2 and 3 hereof shall relieve the Power Company of any of its obligations to the Commission under any other clause of this agreement or the Power Contract as amended hereby;

5. If this agreement be finally ratified as hereinafter provided, then (*a*) all accounts, charges and claims of every kind between the Commission and the Power Company arising out of or connected with the Power Contract up to the date of this agreement or for the inspection of materials and other engineering services are hereby cancelled; (*b*) the monies paid into court in any litigation between any of the parties hereto shall be paid out of court to the parties respectively, who paid in the same, and the parties hereto will secure and furnish all necessary consents therefor;

6. The present appeal to His Majesty's Privy Council now pending between the Commission and the Power Company shall be postponed; and all proceedings in any other actions pending between any of the parties shall be stayed until the final ratification of this agreement or until the time fixed therefor has expired;

7. Upon the said ratification of this agreement the said appeal and all other litigation between the parties hereto or any of them shall be discontinued without costs and the Power Company shall have no claim for any money payment against the Commission under the said judgment appealed from and will give the Commission a satisfaction piece or other release in respect of any money directed to be paid thereunder;

8. This agreement shall be effective on and after the date hereof, but shall cease to be effective on and after the first day of July 1938, unless prior to that date the Trustee for the bondholders of the Power Company shall have given a valid consent to the modifications and changes in the Power Contract as herein provided, and this agreement and the original contract as amended by this agreement shall have been ratified by Act of the Ontario Legislature which said ratifying Act shall also declare that the rights of the Power Company under or arising out of this agreement or the original contract as amended hereby shall in no way be limited or affected by anything contained in Chapter 53 of the Statutes of Ontario, 25 George V, or in any of the three Acts already passed and/or proclaimed in the year 1937 known as "The Power Commission Amendment Act, 1937," "The Power Commission Declaratory Act, 1937," and "The Privy Council Appeals Amendment Act, 1937";

9. Pending such consent and ratification, the Power Contract, as hereby amended shall be in full force and effect, but if such consent and ratification be not finally obtained by the first day of July 1938, then the parties hereto shall revert to their respective positions as though this agreement had not been entered into, but all accounts for anything arising out of this agreement shall be settled as of the first day of July 1938;

10. The parties further agree that in case any of them shall at any time deem it advisable to obtain further legislative or other authority or power, to remove any doubt that may exist in regard to the power of the parties or any of them to enter into and perform this agreement and the agreement between them herein referred to, the other parties hereto shall, at the request of such first mentioned party, join in any application for and co-operate in obtaining such further

legislative or other authority or power, but shall not be required to bear any part of the expense of such application.

In Witness Whereof the parties hereto have caused this agreement to be executed under their corporate seals, attested by the signatures of their proper officers duly authorized thereto:

Signed, Sealed and Delivered In the presence of W. George Hanna (COMMISSION SEAL)	The Hydro-Electric Power Commission of Ontario. (Sgd.) T. H. Hogg, *Chairman.* (Sgd.) R. T. Jeffery, *Acting Secretary and Controller.*
R. A. C. Henry. (POWER COMPANY SEAL)	Beauharnois Light, Heat and Power Company. (Sgd.) Geo. H. Montgomery, *Vice-President.* (Sgd.) C. C. Parkes, *Secretary.*
R. A. C. Henry. (TRANSMISSION CO. SEAL)	Coteau Rapids Transmission Company Limited. (Sgd.) Geo. H. Montgomery, *Vice-President.* (Sgd.) C. C. Parkes, *Secretary.*

SCHEDULE "D"

This Agreement dated this Fourteenth day of December A.D. 1937,

Between:

The Hydro-Electric Power Commission of Ontario,
hereinafter called the "Commission"

Maclaren-Quebec Power Company, a Quebec Corporation,
hereinafter called the "Power Company"

—and—

The James Maclaren Company Limited, a Dominion Corporation,
hereinafter called the "Transmission Company."

Whereas the Commission and the Transmission Company heretofore executed an Indenture dated the 20th day of December 1930, hereinafter called the "Original Contract," relating to the delivery by the Transmission Company to the Commission of electrical power and energy upon the terms set forth in said Indenture;

And Whereas the Transmission Company, the Power Company and the Commission heretofore executed an Indenture dated the 14th day of January 1931, hereinafter called the "Transfer Agreement," whereby, among other things, the Power Company acquired the rights and assumed the obligations of the Transmission Company under the Original Contract;

And Whereas the Commission, the Power Company and the Transmission Company heretofore executed an Indenture dated the 1st day of February 1936, hereinafter called the "1936 Contract," relating to the sale by the Power Company and delivery by the Transmission Company to the Commission of electrical power and energy upon the terms set forth in said Indenture;

And Whereas the parties desire to enter into this agreement;

Now Therefore this Agreement Witnesseth that for the considerations herein contained the parties hereto covenant, promise and agree as follows:—

1. The provisions of the Transfer Agreement shall not apply to the Original Contract as amended hereby;

2. The Original Contract is hereby amended as follows:

(i) The James Maclaren Company Limited is called the "Transmission Company" instead of the "Company" and is made the party of the Third Part, and the Maclaren-Quebec Power Company is called the "Power Company" and is added as party of the Second Part to the Original Contract;

(ii) The second and third recitals are struck out and the following substituted therefor:

> "And Whereas the Transmission Company is duly incorporated under the laws of the Dominion of Canada with power to produce and sell electrical power and energy;
>
> And Whereas the Power Company is prepared to deliver electrical power and energy to the Transmission Company for transmission to the Commission as hereinafter provided and to guarantee to the Commission the performance by the Transmission Company of all the obligations of the Transmission Company to the Commission under this Agreement;"

(iii) Clauses 1 to 12 both inclusive and Clause 14 of the Original Contract are struck out and there are substituted therefor Clauses 1 to 17 both inclusive and Clause 19 of the 1936 Contract but with and subject to the following amendments:

(A) Clause 1 (*a*) is struck out and the following substituted therefor:—

> "(*a*) To keep available for delivery and to deliver to the Transmission Company for transmission and delivery to the Commission, when and as required by the Commission on the conditions herein contained commencing on the Fourteenth day of December 1937 and thereafter so long as this Agreement shall remain in force, the hereinafter mentioned quantities of electrical power and energy;
>
> A minimum of Forty Thousand horsepower (40,000 h.p.) which shall constitute the minimum contract demand until such minimum contract demand is increased as herein provided;
>
> The said minimum contract demand shall be increased as follows:
>
> On the first day of November 1938 to a minimum contract demand of Sixty Thousand horsepower (60,000 h.p.);
>
> On the first day of November 1940 to a minimum contract demand of Eighty Thousand horsepower (80,000 h.p.);
>
> On the first day of November 1944 to a contract demand of One Hundred Thousand horsepower (100,000 h.p.);
>
> The contract demand may with the consent of the Power Company be increased by the Commission by written order beyond the said minimum contract demands but the contract demand shall not be increased beyond the said minimum contract demands except upon an order in writing by the Commission and in any event shall not be increased beyond the said contract demand of One Hundred Thousand horsepower (100,000 h.p.);
>
> Whenever the contract demand shall have been increased as above provided it shall not thereafter be decreased and shall remain the contract demand during the remainder of the term of this Agreement unless further increased;"

(B) Clause 3 (*a*) is amended by adding thereto the following:—

> "Provided, however, that if at any time or times hereafter subsequent to the 30th day of September 1945 during the term of this Contract a higher rate is paid by the Commission directly or indirectly to any other corporation or person for electrical power (from water) generated in the Province of Quebec, or from Quebec water in the Ottawa River or by virtue of Quebec water rights in the Ottawa River, for use in the Commission's Niagara System, then the rate payable under this Contract during any such time shall be such higher rate; the Power Company and the Transmission Company acknowledge that the Commission has communicated to them the terms of the Commission's contracts with (*a*) Gatineau Power Company and Gatineau Transmission Company, (*b*) Beauharnois Light, Heat and Power Company and Coteau Rapids Transmission Company Limited, all dated 14th day of December 1937, together with the earlier contracts with the said Companies amended thereby and the 1936 contracts with Gatineau Power Company and Gatineau Transmission Company and (*c*) the Commission's contracts with Ottawa Valley Power Company dated 4th February 1937, together with the earlier contracts with the said Company amended thereby, and it is agreed that the carrying out and performance by the Commission of the terms of any of the said earlier contracts as so amended, respectively, by agreements made in 1937 and/or of the said 1936 contracts with the said Gatineau Companies shall not be deemed to constitute payment directly or indirectly by the Commission of a higher rate within the meaning of this proviso;"

(C) Clause 10 is amended by inserting after the word "energy" in the twenty-fourth line of the said Clause the words "from the Masson Generating Station of the Power Company" and by inserting after the words "Transmission Company" in the twenty-sixth line of the said Clause the words "or the use of such power or energy by the Power Company for its own purposes otherwise than for the maintenance or operation of its power plant and system";

(D) Clause 14 is struck out and the following substituted therefor:—

> "This Agreement shall continue in effect until the 31st day of October, A.D. 1970;"

(iv) Clause 13 of the Original Contract is re-numbered 18 and is amended by inserting the word "Power" before the word "Company" wherever the word "Company" appears in the said clause;

(v) Clause 20 is added and shall read as follows:—

> "This Agreement shall extend to, be binding upon and enure to the benefit of the successors and assigns of the parties hereto respectively but any assignment other than an assignment to an assignee who shall have complied with Clause 18 shall be subject to the consent in writing of the Commission, which consent shall not be unreasonably withheld;

3. Execution of this Agreement by the several parties hereto shall for all purposes be deemed to be the execution by each of them of the Original Contract subject to the terms of this Agreement and with the amendments herein contained:

4. If this Agreement be finally ratified as hereinafter provided, then there are hereby cancelled all accounts, charges and claims of every kind between the Commission on the one hand and the Power Company and/or the Transmission Company on the other hand arising out of or connected with (*a*) the Original Contract up to the date of this Agreement; (*b*) the 1936 Contract at any time whether heretofore or hereafter except as to current accounts thereunder for power delivered and taken subsequent to the First of November 1937 up to the date of this Agreement:

5. This Agreement shall be effective on and from the date hereof but shall cease to be effective on and after the first day of July 1938 unless prior to that date (*a*) this Agreement and the Original Contract as amended by this Agreement shall have been ratified by Act of the Ontario Legislature, which said ratifying Act shall also declare that the rights of the Power Company and/or the Transmission Company shall in no way be limited or affected by anything contained in The Power Commission Act 1935, Chapter 53, The Power Commission Declaratory Act 1937, Chapter 58, The Power Commission Amendment Act 1937, Chapter 59, or the Privy Council Appeals Amendment Act 1937, Chapter 62, all Acts of the Ontario Legislature; (*b*) the Trustee for the bondholders of the Power Company shall have given valid consent to this Agreement:

6. Pending such ratification and consent this Agreement and the Original Contract as amended by this Agreement shall be in full force and effect, but if the said ratification and consent be not finally obtained by the first day of July 1938, then the parties hereto shall revert to their respective positions as though this Agreement had not been entered into but all accounts between the parties for anything arising out of this Agreement shall be settled as of the first day of July 1938;

In Witness Whereof the parties hereto have caused this Agreement to be executed under their corporate seals and the signatures of their proper officers duly authorized thereto:

Signed, Sealed and Delivered
In the presence of

W. George Hanna
(COMMISSION SEAL)

The Hydro-Electric Power Commission of Ontario.

(Sgd.) T. H. Hogg,
Chairman.
(Sgd.) R. T. Jeffery,
Act. Secretary and Controller.

J. R. Cartwright.

(POWER COMPANY SEAL)

Maclaren-Quebec Power Company.

(Sgd.) T. F. Kenny,
Director.
(Sgd.) J. A. Bryant,
Secretary.

J. R. Cartwright.

(TRANSMISSION CO. SEAL)

The James Maclaren Company Limited.

(Sgd.) T. F. Kenny,
Director.
(Sgd.) J. A. Bryant,
Secretary.

CHAPTER 33

An Act to amend The Rural Power District Service Charge Act.

Assented to April 8th, 1938.
Session Prorogued April 8th, 1938.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

1. This Act may be cited as *The Rural Power District Service Charge Amendment Act, 1938.* Short title.

2. Section 1 of *The Rural Power District Service Charge Act* is repealed and the following substituted therefor: Rev. Stat., c. 66, s. 1. re-enacted.

1. Notwithstanding anything contained in any Statute or municipal by-law or contract, the Lieutenant-Governor in Council, upon the recommendation of The Hydro-Electric Power Commission of Ontario, may from time to time make regulations fixing a maximum service charge for any class of service rendered by the Commission in a rural power district and also fixing the minimum number of consumers of different classes per mile of transmission line required for construction of works by the Commission in a rural power district or part thereof. Fixing maximum service charge, etc.

3. Subsection 1 of section 2 of *The Rural Power District Service Charge Act* is repealed and the following substituted therefor: Rev. Stat., c. 66, s. 2, subs. 1, re-enacted.

(1) Where in any rural power district by reason of such maximum service charge or minimum number of consumers having been fixed pursuant to section 1, the revenue derived from such service charge is not sufficient to meet the necessary cost of the service as specified by the Commission, the deficit shall be chargeable to and payable out of the Consolidated Revenue Fund. Where deficit arises.

4. This Act shall come into force on the day upon which it receives the Royal Assent. Commencement of Act.

APPENDIX II—

TOTAL MILEAGE OF TRANSMISSION LINES AND NUMBER OF

System and voltage	Line route or structure miles		
	Total to Oct. 31, 1937	Additions 1938	Total to Oct. 31, 1938
Niagara System			
220,000-volt	705.27	......	705.27
110,000-volt	715.20	0.91	716.11
110,000-volt	67.16	......	67.16
90,000-volt	65.85	......	65.85
60,000-volt	78.75	......	78.75
60,000-volt	19.21	*10.01	9.20
46,000-volt	32.42	......	32.42
46,000-volt	21.88	1.85	23.73
26,400-volt	598.18	16.70	614.88
13,200-volt	453.58	7.93	461.51
13,200-volt	1.17	......	1.17
12,000-volt	117.91	*6.65	111.26
Dominion Power division—44,000-volt	37.31	*2.55	34.76
Dominion Power division—44,000-volt	141.36	3.86	145.22
Dominion Power division—22,000-volt	28.10	0.59	28.69
Dominion Power division—22,000-volt (concrete poles)	9.00	*9.00	....
Dominion Power division—10,000-volt	14.52	......	14.52
Georgian Bay System			
110,000-volt	55.83	......	55.83
38,000-volt	57.30	89.62	146.92
22,000-volt	13.44	*13.44	....
6,600-volt	2.30	......	2.30
Severn district—22,000-volt	176.22	*27.61	148.61
Eugenia district—26,400-volt and less	321.00	*39.27	281.73
Wasdell district—22,000-volt	83.72	*0.29	83.43
Muskoka district—22,000-volt	26.46	*0.15	26.31
Eastern Ontario System			
110,000-volt	107.08	......	107.08
110,000-volt	163.44	......	163.44
44,000-volt	24.33	......	24.33
33,000-volt	27.90	14.36	42.26
Central district—44,000-volt and less	521.27	10.72	531.99
St. Lawrence district—44,000-volt	125.02	0.61	125.63
Rideau district—26,400-volt	76.99	*14.36	62.63
Madawaska district—33,000-volt and less	58.81	......	58.81
Thunder Bay System			
110,000-volt	82.12	......	82.12
110,000-volt	178.21	......	178.21
44,000-volt	115.09	1.33	116.42
22,000-volt	0.35	......	0.35
12,000-volt	1.45	......	1.45
Northern Ontario Properties			
Nipissing district—22,000-volt	51.67	7.73	59.40
Sudbury district—22,000-volt	107.31	......	107.31
Abitibi district—132,000-volt	362.74	......	362.74
132,000-volt	190.19	......	190.19
26,400-volt and less	49.27	4.58	53.85
Espanola district—33,000-volt	10.74	*3.91	6.83
Patricia district—44,000-volt	....	40.56	40.56
St. Joseph district—22,000-volt	28.14	......	28.14
Total	6,125.26	†74.11	6,199.37

*Removals. †Net increase.

TRANSMISSION LINE RECORDS

SUPPORTING STRUCTURES CONSTRUCTED AND ACQUIRED

Circuit miles			Number of steel towers			Number of wood poles		
Total to Oct. 31, 1937	Additions 1938	Total to Oct. 31, 1938	Total to Oct. 31, 1937	Additions 1938	Total to Oct. 31, 1938	Total to Oct. 31, 1937	Additions 1938	Total to Oct. 31, 1938
705.27	....	705.27	3,522	....	3,522	....	....	....
1,375.76	1.82	1,377.58	6,571	9	6,580	....	....	....
67.16	....	67.16	....	....	....	824	....	824
128.72	*11.12	117.60	731	....	731	....	....	....
59.38	....	59.38	947	*12	935	....	....	....
19.21	*10.01	9.20	....	....	....	472	*308	164
65.64	....	65.64	375	2	377	....	....	....
21.88	1.85	23.73	....	....	....	685	66	751
751.69	16.69	768.38	....	....	....	23,050	495	23,545
528.45	4.70	533.15	....	....	....	17,678	136	17,814
2.34	....	2.34	38	....	38	....	....	....
175.52	*14.56	160.96	7	....	7	4,821	*333	4,488
74.62	*2.55	72.07	526	*20	506	....	....	....
137.74	3.86	141.60	....	....	....	5,103	157	5,260
33.45	4.76	38.21	....	....	....	1,293	2	1,295
18.00	*18.00	....	....	....	....	253	*253	....
14.52	....	14.52	....	....	....	498	....	498
55.83	....	55.83	....	....	....	548	....	548
57.73	89.62	147.35	....	....	....	840	3,443	4,283
13.44	*13.44	....	....	....	....	211	*211	....
2.30	....	2.30	....	....	....	101	....	101
247.15	*27.61	219.54	....	....	....	7,448	*1,488	5,960
404.39	*39.91	364.48	....	....	....	12,631	*1,530	11,101
87.66	*0.29	87.37	....	....	....	3,268	*34	3,234
26.46	*0.15	26.31	....	....	....	1,148	*6	1,142
110.39	....	110.39	636	....	636	....	....	....
163.44	....	163.44	2	....	2	1,833	....	1,833
24.33	....	24.33	....	....	....	286	....	286
33.58	14.36	47.94	....	....	....	925	523	1,448
572.50	10.72	583.22	2	....	2	18,531	328	18,859
125.02	0.99	126.01	....	....	....	4,355	*2	4,353
76.99	*14.36	62.63	....	....	....	2,870	*523	2,347
58.81	....	58.81	....	....	....	1,965	....	1,965
164.28	....	164.28	539	....	539	....	....	....
178.21	....	178.21	4	....	4	2,730	....	2,730
115.09	1.33	116.42	....	....	....	3,062	41	3,103
0.35	....	0.35	....	....	....	15	....	15
1.45	....	1.45	....	....	....	61	....	61
68.19	7.73	75.92	....	....	....	1,839	318	2,157
107.31	....	107.31	2	....	2	4,067	....	4,067
725.48	....	725.48	1,880	....	1,880	....	....	....
190.19	....	190.19	....	....	....	2,717	....	2,717
49.44	4.58	54.02	....	....	....	1,724	140	1,864
10.74	*3.91	6.83	1	*1	0	291	*137	154
....	40.56	40.56	....	....	....	....	416	416
28.14	....	28.14	....	....	....	746	....	746
7,878.24	†47.66	7,925.90	15,783	*22	15,761	128,889	†1,240	130,129

APPENDIX II

LINES FOR THE USE OF

System	Total route or structure miles			Miles of single-circuit line		
	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938
Niagara system and N.A.	673.35	*0.28	673.07	225.23	1.56	226.79
Dominion Power division	....	....	....	....	....	....
Georgian Bay system	....	....	....	....	....	....
Eastern Ontario system	14.46	0.03	14.49	11.61	....	11.61
Thunder Bay system	0.33	0.10	0.43	0.33	0.10	0.43
Northern Ontario Properties	281.85	0.08	281.93	273.10	....	273.10
Totals	969.99	*0.07	‡969.92	510.27	1.66	511.93

Included in totals are 1.51 miles of 8-circuit line (E.O. system) and 5.80 miles of 6-circuit line and
*Removals. ‡This total is exclusive of telephone cable.

TELEPHONE CIRCUITS CARRIED

System	Total route or structure miles			Miles of single-circuit line		
	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938
Niagara system and N.A.	1,093.75	5.90	1,099.65	1,005.43	9.48	1,014.91
Dominion Power division	20.22	....	20.22	15.03	*0.92	14.11
Georgian Bay system	716.98	*8.62	708.36	653.59	*35.59	618.00
Eastern Ontario system	946.63	10.21	956.84	843.93	7.73	851.66
Thunder Bay system	208.79	....	208.79	203.09	....	203.09
Northern Ontario Properties	405.79	34.53	440.32	405.01	34.28	439.29
Totals	3,392.16	†42.02	‡3,434.18	3,126.08	†14.98	3,141.06

Included in totals are 2.37 miles of 5-circuit line in E.O. system.
*Removals. †Net increase. ‡This total is exclusive of telephone cable.
Derived (carrier and phantom) circuits to Oct. 31, 1937: Niagara system—298.69 miles.
Derived (carrier and phamtom) circuits to Oct. 31, 1938: Niagara system—298.69 miles,
These circuits are additional to the above tabulation but are made available by utilizing listed

(Concluded)

TELEPHONE CIRCUITS ONLY

Miles of two-circuit line			Miles of three-circuit line			Miles of four-circuit line			Miles of telephone cable		
Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938
351.08	*0.84	350.24	9.08	......	9.08	75.10	*1.00	74.10	25.43	......	25.43
......	......	......	......	......	......	......	......	......	......	......	......
......	......	......	......	......	......	......	......	......	......	......	......
1.37	......	1.37	......	......	......	......	......	......	......	1.51	1.51
......	......	......	......	......	......	......	......	......	......	......	......
8.75	*0.86	7.89	......	0.94	0.94	......	......	......	1.25	......	1.25
361.20	*1.70	359.50	9.08	0.94	10.02	75.10	*1.00	74.10	26.68	1.51	28.19

7.06 miles of 5-circuit line in Niagara system.

JOINTLY WITH POWER CIRCUITS

Miles of two-circuit line			Miles of three-circuit line			Miles of four-circuit line			Miles of telephone cable		
Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938	Completed to Oct. 31, 1937	Completed Oct. 31, 1937 to Oct. 31, 1938	Total to Oct. 31, 1938
79.90	2.81	82.71	0.46	......	0.46	7.96	......	7.96	3.46	......	3.46
5.19	*0.02	5.17	......	......	......	......	......	......	......	......	......
55.84	34.46	90.30	7.55	*0.21	7.34	......	......	......	......	......	......
99.08	0.09	99.17	......	0.32	0.32	1.25	......	1.25	......	......	......
5.70	......	5.70	......	......	......	......	......	......	......	......	......
0.78	......	0.78	......	......	......	......	......	......	......	......	......
246.49	37.34	283.83	8.01	0.11	8.12	9.21	......	9.21	3.46	......	3.46

Eastern Ontario system—12.70 miles.
Eastern Ontario system—12.70 miles.
physical circuits.

APPENDIX III

CONSTRUCTION IN RURAL POWER DISTRICTS

Summary of Data Respecting Distribution Lines Constructed in Rural Power Districts by The Hydro-Electric Power Commission of Ontario

Below is shown in tabular form the work carried on under the supervision of the Distribution section of the Electrical Engineering department in Rural Power Districts during the year ended October 31, 1938.

SUMMARY OF CONSTRUCTION IN RURAL POWER DISTRICTS

	At October 31, 1937		At October 31, 1938					
	Miles of primary line constructed	Number of consumers receiving service	Miles of primary line			Number of consumers		
			Constructed	Under construction or authorized	Total	Receiving service	Authorized	Total
Niagara System......	8,512.47	57,629	9,671.10	350.27	10,021.37	64,447	1,090	65,537
Georgian Bay System								
Severn district......	507.46	4,244	666.07	33.73	699.80	5,362	88	5,450
Eugenia district.....	404.22	1,761	584.56	47.27	631.83	2,579	177	2,756
Wasdells district.....	283.93	2,019	354.31	11.57	365.88	2,446	35	2,481
Muskoka district....	222.58	1,201	251.56	3.77	255.33	1,483	16	1,499
Bala district........	56.30	360	64.15	0	64.15	437	0	437
System R.P.D.'s.....	20.76	111	115.38	10.22	125.60	590	39	629
Eastern Ontario System								
Central district......	1,556.50	9,963	1,957.39	82.67	2,040.06	11,884	366	12,250
St. Lawrence district.	540.70	3,214	689.75	118.91	808.66	3,876	346	4,222
Rideau district......	114.97	685	178.28	32.19	210.47	1,020	104	1,124
Madawaska district..	42.57	312	51.75	17.42	69.17	331	68	399
Ottawa district......	219.85	1,417	235.15	8.98	244.13	1,545	24	1,569
Thunder Bay System.	95.68	422	119.04	7.20	126.24	594	20	614
Manitoulin R.P.D....	47.15	232	67.53	22.32	89.85	261	128	389
Northern Ontario Properties								
Nipissing district....	20.55	504	29.74	2.10	31.84	554	11	565
Total........	12,645.69	84,074	15,035.76	748.62	15,784.38	97,409	2,512	99,921

DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS

Rural power district	Property number	At October 31, 1937		At October 31, 1938	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
NIAGARA SYSTEM					
Acton	N5D1	12.24	37	14.20	45
Ailsa Craig	N4D7	6.41	18	25.91	28
Alvinston	N18D9	14.41	18	18.30	34
Amherstburg	N15D3	88.55	744	97.14	811
Aylmer	N11D2	172.67	942	225.78	1,269
Ayr	N12D4	29.58	112	36.83	130
Baden	N7D1	124.67	588	128.81	624
Beamsville	N44D3	194.20	1,775	212.17	1,878
Belle River	N15D2	51.58	480	57.00	534
Blenheim	N14D3	84.19	440	91.62	517
Bond Lake	N3D3	190.68	1,969	203.17	2,067
Bothwell	N14D10	63.91	234	93.33	325
Brampton	N13D2	71.66	247	82.56	279
Brant	N12D1	164.61	850	185.14	987
Brigden	N18D8	41.66	142	61.04	158
Burford	N12D2	70.60	368	89.24	424
Caledonia	N2D5	139.53	737	161.06	863
Chatham	N14D1	194.98	1,090	214.50	1,225
Chippawa	N1D7	31.96	224	33.16	242
Clinton	N8D11	79.57	445	98.70	535
Delaware	N4D3	149.27	761	165.97	809
Dorchester	N4D1	129.74	706	141.59	769
Dresden	N14D12	52.75	181	79.26	265
Drumbo	N12D5	77.85	353	86.87	406
Dundas	N2D1	148.90	932	156.65	1,017
Dunnville	N1D9	28.05	173	72.77	390
Dutton	N11D3	60.39	231	90.71	295
Elmira	N7D3	26.05	110	26.05	110
Elora	N5D4	60.69	321	75.05	362
Essex	N15D7	112.94	597	136.32	699
Exeter	N4D6	85.15	768	100.91	875
Forest	N18D6	61.33	263	86.79	372
Galt	N6D2	47.14	403	49.70	430
Georgetown	N5D2	68.28	332	75.50	357
Goderich	N8D2	55.35	234	63.16	260
Grantham	N44D1	64.62	914	65.61	923
Guelph	N5D3	121.16	716	138.40	800
Haldimand	N2D8	112.65	500	145.08	678
Harriston	N8D5	24.71	73	25.84	77
Harrow	N15D4	77.19	784	81.44	833
Ingersoll	N10D3	202.98	723	216.76	803
Jordan	N44D2	46.29	449	46.88	458
Keswick	N3D5	71.90	1,276	77.26	1,365
Kingsville	N15D5	162.53	1,743	173.36	1,849
Listowel	N8D8	84.45	387	96.15	430

DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS—Continued

Rural power district	Property number	At October 31, 1937		At October 31, 1938	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
NIAGARA SYSTEM—Concluded					
London	N4D2	214.30	2,576	220.56	2,717
Lucan	N4D5	66.43	211	77.54	246
Lynden	N2D2	70.99	307	76.90	331
Markham	N3D1	150.15	1,194	162.74	1,315
Merlin	N14D15	114.52	444	126.19	504
Milton	N13D3	83.04	415	88.80	451
Milverton	N8D9	55.61	225	59.64	240
Mitchell	N8D7	81.79	421	91.52	461
Newmarket	N3D4	82.82	513	91.84	579
Niagara	N1D1	54.14	372	59.20	437
Norwich	N10D1	146.98	687	156.63	775
Oil Springs	N18D3	25.37	121	35.88	165
Palmerston	N8D6	49.22	158	58.81	197
Petrolia	N18D5	23.09	107	30.35	139
Preston	N6D1	166.19	1,306	175.04	1,373
Ridgetown	N14D2	116.46	802	122.77	848
St. Jacobs	N7D2	77.17	439	86.62	472
St. Marys	N9D1	146.28	556	172.14	675
St. Thomas	N11D1	201.64	1,352	215.23	1,467
Saltfleet	N17D1	100.58	1,877	102.68	1,984
Sandwich	N15D1	136.84	2,234	146.13	2,464
Sarnia	N18D4	108.13	1,575	112.17	1,682
Scarboro	N3D2	102.95	1,153	107.16	1,288
Seaforth	N8D10	17.96	156	24.56	174
Simcoe	N12D6	99.80	586	124.88	750
Stamford	N44D4	9.44	305	9.69	279
Stratford	N8D4	39.07	245	48.26	259
Strathroy	N4D4	111.09	331	134.09	432
Streetsville	N13D1	118.54	557	125.04	617
Tavistock	N8D1	112.93	423	126.20	490
Thamesville	N14D11	89.86	357	103.52	423
Tilbury	N14D14	114.34	472	133.80	561
Tillsonburg	N10D4	154.57	802	175.33	968
Wallaceburg	N14D13	139.38	794	174.85	967
Walsingham	N12D7	205.30	1,034	245.08	1,295
Walton	N8D3	60.82	343	79.43	393
Waterdown	N2D3	79.75	1,066	83.49	1,085
Waterford	N12D3	98.33	433	122.33	547
Watford	N18D7	26.27	61	40.64	141
Welland	N1D5	296.69	3,103	312.49	3,361
Woodbridge	N16D1	243.15	1,306	251.14	1,395
Woodstock	N10D2	160.67	820	176.00	894

DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS—Continued

Rural power district	Property number	At October 31, 1937		At October 31, 1938	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
GEORGIAN BAY SYSTEM					
SEVERN DISTRICT					
Alliston	S32D1	38.19	206	46.83	244
Barrie	S4D1	85.08	693	95.05	781
Beeton	S33D1	1.80	5	1.80	5
Bradford	S37D1	36.65	117	49.68	162
Buckskin	S24D1	1.75	23	1.75	23
Cookstown	S35D1	0.90	3	2.98	5
Creemore	S10D2	53.81	198	86.41	312
Elmvale	S7D1	44.18	218	51.98	257
Hawkestone	S9D1	54.48	303	72.18	398
Innisfil	S31D1	41.64	809	45.55	973
Medonte	S18D1	37.32	168	63.66	287
Midland	S1D1	63.34	415	80.11	605
Nottawasaga	S5D1	8.22	108	19.87	145
Thornton	S36D1	8.14	34	10.98	39
Tottenham	S34D1	6.90	14	11.46	33
Wasaga Beach	S10D1	25.06	930	25.78	1,093
EUGENIA DISTRICT					
Arthur	E13D2	2.40	12	8.46	24
Bruce	E19D1	77.44	367	129.54	588
Chatsworth	E3D1	0	22	0	19
Dundalk	E5D1	6.99	28	22.79	68
Flesherton	E1D1	13.65	40	20.50	108
Holstein	E7D1	0.50	9	2.00	15
Lucknow	E24D1	5.57	3	9.18	39
Markdale	E1D2	20.85	90	23.37	97
Mount Forest	E9D1	......	....	......	....
Neustadt	E8D1	0.76	7	3.86	17
Orangeville	E12D1	51.92	173	93.79	277
Owen Sound	E2D1	39.32	171	41.17	205
Ripley	E24D2	31.90	41	66.03	186
Sauble	E46D1	22.85	137	32.50	237
Shelburne	E10D1	19.37	65	24.37	82
Tara	E15D1	48.96	205	55.81	234
Wroxeter	E22D1	47.56	339	51.19	383
WASDELLS DISTRICT					
Beaverton	W2D1	40.06	434	53.84	523
Cannington	W3D1	14.10	66	29.91	114
Kirkfield	W6D1	9.89	50	20.91	97
Mariposa	W9D1	55.06	357	61.54	395
Port Perry	W12D1	55.39	471	62.22	532
Sparrow Lake	W1D1	43.63	412	51.18	511
Uxbridge	W11D1	65.80	229	74.71	274
MUSKOKA DISTRICT					
Beaumaris	M7D1	64.49	437	67.53	478
Baysville	M10D1	36.81	213	42.85	268
Huntsville	M2D1	68.05	287	91.55	465
South Falls	M1D1	0.10	4	0.60	16
Utterson	M8D1	41.54	212	49.03	256

DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS—Continued

Rural power district	Property number	At October 31, 1937		At October 31, 1938	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
GEORGIAN BAY SYSTEM—Concluded					
BALA DISTRICT					
Bala	GB13D1	56.30	360	64.15	437
SYSTEM R.P.D.'s					
Gravenhurst	G34D1	11.59	48	14.17	62
Meaford	G14D1	14.18	52	59.77	301
Minden	G37D1	20.76	111	41.44	227
EASTERN ONTARIO SYSTEM					
CENTRAL DISTRICT					
Belleville	C38D1	126.84	869	148.11	1,007
Bowmanville	C23D1	47.76	216	56.38	269
Brighton	C6D1	15.19	81	15.41	94
Campbellford	C11D1	31.05	119	46.57	159
Cobourg	C13D1	138.45	667	159.78	788
Colborne	C7D1	54.57	290	74.54	382
Fenelon Falls	C30D1	78.62	494	107.50	666
Kingston	C44D1	210.03	1,181	237.90	1,403
Lakefield	C18D1	36.07	158	61.29	261
Madoc	C33D1	......	....	16.58	17
Marmora	C47D1	2.85	25	3.62	29
Millbrook	C25D1	28.24	159	31.47	178
Napanee	C43D1	188.83	873	238.38	1,069
Newcastle	C22D1	31.45	143	38.41	147
Norwood	C31D1	23.11	144	38.09	199
Omemee	C26D1	5.55	14	23.55	49
Oshawa	C24D1	168.34	1,975	185.97	2,180
Peterboro	C20D1	85.62	1,312	101.65	1,375
Stirling	C35D1	32.16	139	45.75	174
Sulphide	C34D1	15.31	55	16.64	78
Trenton	C3D1	78.00	339	82.43	378
Warkworth	C49D1	11.15	45	11.81	51
Wellington	C45D1	147.31	665	215.56	931
ST. LAWRENCE DISTRICT					
Alexandria	L15D1	34.39	171	46.25	219
Brockville	L3D1	108.45	794	139.20	953
Chesterville	L5D1	95.57	580	115.15	682
Cornwall	L1D1	......	....	0	0
Iroquois	L9D1	104.45	549	106.11	531
Martintown	L13D1	35.44	182	58.80	279
Maxville	L14D2	72.82	474	127.21	703
Prescott	L2D1	53.26	269	57.40	296
Williamsburg	L7D1	36.32	195	39.63	213
RIDEAU DISTRICT					
Carleton Place	H5D1	1.16	4	28.09	102
Kemptville	H9D1	5.43	54	5.87	61
Perth	H2D1	21.11	104	48.67	245
Smiths Falls	H3D1	87.27	523	95.65	612

DETAILS OF CONSTRUCTION IN RURAL POWER DISTRICTS—Concluded

Rural power district	Property number	At October 31, 1937		At October 31, 1938	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
EASTERN ONTARIO SYSTEM—Concluded					
MADAWASKA DISTRICT					
Arnprior	QM10D1	9.32	80	10.97	85
Renfrew	QM16D1	33.25	232	40.78	246
Pembroke	QM30D1	......	....	0.00	0
OTTAWA DISTRICT					
Nepean	T1D1	219.85	1,417	235.15	1,545
THUNDER BAY SYSTEM					
Fort William	P10D1	64.93	245	77.94	354
Port Arthur	P2D1	30.75	177	41.10	240
MANITOULIN RURAL POWER DISTRICT					
Manitoulin	MR1D1	47.15	232	67.53	261
NORTHERN ONTARIO PROPERTIES					
NIPISSING DISTRICT					
North Bay	Z4D1	16.45	485	25.64	535
Powassan	Z8D1	4.10	19	4.10	19

APPENDIX IV

GENERATING STATIONS

Operated by The Hydro-Electric Power Commission of Ontario on Behalf of Municipalities Comprising the Co-operative Systems, and on Behalf of the Province in the case of the Northern Ontario Properties

In the Twenty-fourth Annual Report, which was for the year 1931, there was printed as Appendix IV a list of generating stations operated by the Commission. Since that time the Commission has constructed or acquired additional plants, and added to the equipment of others. After the lapse of seven years it is desirable to bring this tabulation up-to-date.

On the following pages, the generating stations are grouped under the systems to which they respectively belong, and particulars are given of the hydraulic features of the developments, the main turbines, the main generators, the exciters, and the step-up transformers.

Abbreviations

h.p.	horsepower
kw.	kilowatts
kv-a.	kilovolt-amperes
kv.	kilovolts
ft.	foot or feet

NIAGARA SYSTEM

GENERAL—This system comprises all the territory lying between Niagara Falls, Hamilton and Toronto, on the east, and Windsor, Sarnia and Goderich, on the west and north, served with electrical energy generated at plants on the Niagara river, and the Ottawa river at Chats Falls, and supplemented with purchased power transmitted from generating stations in the province of Quebec.

TRANSMISSION LINES—220 kv. 705.3 miles; 110 kv. 783.3 miles; 90 kv. to 12 kv. 1,398.77 miles. Less than 12 kv. not included.

TRANSFORMATION—Total capacity in 179 stations owned by the Commission = step up, 988,680 kv-a. in 5 stations; step down, 1,267,188 kv-a. in 1-220 kv., 24-110 kv. transformer stations, 148 distributing stations and 10,000 kv-a. in 1 auto-transformer station.

GENERATION:

Queenston Generating Station

Situated at Queenston, on the Niagara river. Constructed by Commission. Official opening, December 28, 1921. Commercial operation, January 26, 1922. Intake at Chippawa, at mouth of Welland river (Grass Island Pool), above Niagara Falls. Water conveyed through canal 12¾ miles long, 4¼ miles of which, from intake to Montrose, consists of channel of Welland river, widened and deepened, flow being reversed; remaining 8½ miles excavated concrete-lined canal to forebay at Queenston, thence down the face of the cliff through penstocks provided with automatically operated Johnson valves to the turbines. Net operating head, 294 ft.

Main Turbines—Two 52,500 h.p. Wellman-Seaver-Morgan; three 55,000 h.p. William Cramp; five 58,000 h.p. Dominion Engineering Works, all vertical shaft. Total capacity, 560,000 h.p.

Auxiliary Turbines—Two 2,800 h.p. Canadian Allis-Chalmers. Total capacity, 5,600 h.p.

Main Generators—Three 45,000 kv-a., two 55,000 kv-a. Canadian Westinghouse Company.; two 45,000 kv-a., three 54,000 kv-a. Canadian General Electric Company, 3-phase, 25 cycles, 21 kv. vertical shaft with thrust bearing. Total capacity, 497,000 kv-a.

Auxiliary Generators—Two 2,200 kv-a. Canadian Westinghouse Company, 3-phase, 2,300 volts, vertical shafts. Total capacity, 4,400 kv-a.

Exciters—Five 150 kw., five 180 kw. direct connected to main generators; two 30 kw. direct connected to auxiliary generators.

Transformers—Five banks = fifteen 15,000 kv-a.; 5 banks = fifteen 18,333 kv-a. Canadian Westinghouse Company, single-phase, 12 to 63.5 kv. to operate 110 kv. star connected. Total capacity, 500,000 kv-a.

Ontario Power Generating Station

Situated in Queen Victoria Niagara Falls Park, below Horseshoe Falls. Formerly property of Ontario Power Company. In operation July, 1905. Purchased by Commission, August, 1917. Intake and head works at first cascade of upper rapid, one mile above generating station. Water conveyed through three conduits of steel, concrete, and wood stave respectively to distributors, from which steel penstocks lead through rock cliff to turbines. Net operating head, 180 ft.

Main Turbines—Seven 11,700 h.p. and five 13,400 h.p. Voith; two 13,400 h.p. Wellman-Seaver-Morgan; one 20,000 h.p. S. Morgan Smith inward flow, horizontal, twin type. Total capacity, 195,700 h.p.

Auxiliary Turbines—Two 1,600 h.p. Canadian Allis-Chalmers; two 500 h.p. Jenckes Machine Company. Total capacity, 4,200 h.p.

Main Generators—Seven 8,776 kv-a., one 15,000 kv-a. Canadian General Electric Company; four 8,770 kv-a., three 7,500 kv-a. Westinghouse Electric and Manufacturing Company, 3-phase, 25 cycles, 12 kv-a. Total capacity, 134,012 kv-a.

Auxiliary Generators—Two 375 kw. Westinghouse Electric and Manufacturing Company; two 1,060 kw. Allis-Chalmers-Bullock. Total capacity, 2,870 kw.

Exciters—Six 40 kw., ten 60 kw., three 125 kw. Canadian General Electric Company, motor driven.

Transformers—Four banks = twelve 3,000 kv-a., 12 to 60 kv., single-phase, Westinghouse Electric and Manufacturing Company; 2 banks = six 3,000 kv-a., 12 to 30 kv., single-phase, Canadian Westinghouse Company. Total capacity, 54,000 kv-a.

Toronto Power Generating Station

Situated in Queen Victoria Niagara Falls Park, above the Horseshoe Falls. Formerly owned by Toronto Power Company. In operation 1906-07. Purchased by Commission, 1922. Water collected by wing dam conveyed to turbines from head works through steel penstocks. Tail-race tunnelled through solid rock, discharging under Niagara Falls. Net operating head, 135 ft.

Main Turbines—Seven 15,500 h.p., four 13,000 h.p. William Cramp, all vertical shaft. Total capacity, 160,500 h.p.

Auxiliary Turbines—Two 500 h.p. Morris, vertical shaft. Total capacity, 1,000 h.p.

Main Generators—Two 8,000 kv-a. General Electric Company; two 8,000 kv-a., seven 10,000 kv-a. Canadian General Electric Company, 3-phase, 25 cycles. 12 kv., vertical shaft. Total capacity, 102,000 kv-a.

Auxiliary Generators—Three 300 kw. Canadian General Electric Company, 125 volts, two turbine driven and one motor driven.

Exciters—Eleven 50 kw., 125 volts, direct connected to main generators.

Transformers—Three banks = nine 2,670 kv-a.; 2 banks = six 6,000 kv-a., 12 to 60 kv., Canadian General Electric Company, single-phase. Total capacity, 60,030 kv-a.

Chats Falls Generating Station

Situated on the Ottawa river, thirty miles up-stream from the city of Ottawa. Plant controlled and owned jointly by the Hydro-Electric Power Commission of Ontario and the Ottawa Valley Power Company. First four units ready for operation October, 1931. Power house and intake integral with dam. Combined length of dam and power house, approximately three miles. Power fed at generator voltage to adjacent outdoor transformer station, where it is stepped up to 220 kv. for transmission over the Commission's lines to Toronto. Designed operating head, 53 ft.

Main Turbines—Eight 28,000 h.p. Dominion Engineering Works Limited propeller type, vertical shaft. Total capacity, 224,000 h.p. Plant designed for an ultimate installation of 10 units.

Main Generators—Eight 23,500 kv-a. Canadian Westinghouse Company, 3-phase, 25 cycles, 13.2 kv. vertical shaft.

Exciters—Eight 200 kw., 250 volts Canadian Westinghouse Company, direct connected to main generators.

Transformers—Four banks = twelve 15,700 kv-a. Canadian General Electric Company, 220 to 13.2 kv., 25 cycles, single phase. Total capacity, 188,400 kv-a.

Chats Falls Frequency-Changer Station

Situated at the Ontario end of Chats Falls generating station in space provided for future unit No. 1. Constructed by Commission. Placed in service October 13, 1935. Power supplied from Chats Falls generator bus to 25-cycle motor of frequency-changer set and fed from 60-cycle generator to transformer, where it is stepped up to 121 kv. for transmission to Eastern Ontario system.

Frequency-changer—One 45,000 kv-a. Canadian Westinghouse Company, 13.2 kv., 25/60-cycle vertical shaft.

Exciters—Two 200 kw., 250-volt generators on same shaft, with 600 h.p. motor.

Transformer—One 45,000 kv-a. Canadian Westinghouse Company, 121 to 13.2 kv., 60 cycles, 3-phase.

NIAGARA SYSTEM (DOMINION POWER DIVISION)

General—This system comprises certain urban and rural districts in the vicinity of the cities of St. Catharines, Hamilton and Brantford, formerly served by subsidiaries of the Dominion Power and Transmission Company. Properties, including generating plants, transmission lines, and substations, were purchased in April, 1930. Power is obtained from a hydraulic development at DeCew Falls and a steam plant at Hamilton; 25-cycle power is also purchased from Canadian Niagara Power Company and converted to 66.6 cycles at Niagara Falls.

Transmission Lines—44 kv., 179.98 miles; 22 to 10 kv., 43.2 miles. Less than 10 kv. not included.

Transformation—Total capacity in 18 stations owned by the Commission = step up, 79,200 kv-a. in 3 stations; step down, 21,925 kv-a. in 15 transformer stations.

Generation:

DeCew Falls Generating Station

Situated at Power Glen about two miles from St. Catharines. Formerly owned by Dominion Power and Transmission Company. In operation, August, 1898. Purchased by the Commission in April, 1930. Water supplied from Welland Ship Canal to forebay, thence through seven steel penstocks to turbines. Tail water passes by natural stream channel to lake Ontario. Net operating head, 260 ft.

Main Turbines—Six 7,000 h.p., one 3,500 h.p. Voith; two 3,000 h.p. Riva Monneret. Total capacity, 51,500 h.p.

Auxiliary Turbines—Two 40 h.p., one 750 h.p. Total capacity, 830 h.p.

Main Generators—One 2,500 kv-a., four 6,400 kv-a. Canadian Westinghouse Company; two 5,000 kv-a. Westinghouse Electric and Manufacturing Company; two 2,000 kv-a. Canadian General Electric Company, 3-phase, 66.6 cycles, 2,400 volts. Total capacity, 42,100 kv-a.

Auxiliary Generator—One 500 kv-a. Canadian Westinghouse Company.

Exciters—One 100 kw. Canadian Westinghouse Company; three 100 kw. Westinghouse Electric and Manufacturing Company, motor driven; one 40 kw. Canadian General Electric Company, belt driven from main generator; one 30 kw. Royal Electric Company direct connected to auxiliary turbines, 70 volts.

Transformers—Two banks = six 2,000 kv-a. Canadian Westinghouse Company, 2.4 to 24 kv.; five 2,500 kv-a., four 3,200 kv-a. Westinghouse Electric and Manufacturing Company; one 2,500 kv-a., two 3,200 kv-a. Canadian Westinghouse Company, 66.6 cycles, 2.4 to 45 kv. Total capacity, 46,200 kv-a.

Steam Plant

Situated on Burlington Bay, at the north-eastern limits of the city of Hamilton. Formerly property of Dominion Power and Transmission Company. In operation, 1916. Purchased by the Commission in April, 1930. Coal-fired boilers supply steam to direct connected turbo-alternators.

Main Steam Turbines—Two 14,750 h.p. Westinghouse Machine Company. Total capacity 29,500 h.p.

Auxiliary Steam Turbine—One 75 kw. direct connected to exciter. Two pump units.

Main Generators—Two 12,500 kv-a. Westinghouse Electric and Manufacturing Company, turbo-alternators, 3-phase, 66.6 cycles, 6.6. kv. Total capacity, 25,000 kv-a.

Exciters—One 75 kw. Westinghouse Electric and Manufacturing Company, steam turbine driven; two 75 kw. Canadian Westinghouse Company, motor driven, 125 volts.

Transformers—Two banks = six 4,000 kv-a., 6.6 to 42 kv., single-phase, Canadian Westinghouse Company. Total capacity, 24,000 kv-a.

Frequency Changer Station

Situated at Niagara Falls. In operation, 1924. Purchased by the Commission in April, 1930. Power supplied to motor at 25 cycles.

Motor—One 8,200 kv-a., 3-phase, 25 cycles, 12 kv. Canadian Westinghouse Company.

Generator—One 9,000 kv-a., 3-phase, 66.6 cycles, 13.2 kv., Canadian Westinghouse Company.

Exciter—One 90 kw., 125 volts, direct connected.

Transformers—One bank = three 3,000 kv-a. Canadian Westinghouse Company, single-phase, 13.2 to 48 kv. Total capacity, 9,000 kv-a.

GEORGIAN BAY SYSTEM

General—This system comprises the area adjoining on the north that section of country served by the Niagara System. It is a consolidation of what were formerly four systems known respectively as Severn, Eugenia, Wasdells and Muskoka, to which have been added properties and plants purchased from private interests and incorporated into the system as the Bala district. Power is obtained from developments on the Severn, Beaver, Muskoka and Saugeen rivers, supplemented with purchased power from the Orillia municipal plant. Additional power is provided from the Niagara system through frequency changers at Mount Forest and Hanover.

Severn district adjoins the Niagara system on the south, and is the central portion of the system. Power developments in the district are on the Severn and Muskoka rivers.

Eugenia district also adjoins the Niagara system on the south and the Severn district on the east. Power developments are on the Saugeen and Beaver rivers.

Wasdells district is the south-eastern portion of the system with developments on the Severn river.

Muskoka district is the north-eastern portion of the system with developments on the Muskoka river.

Bala district serves a small section of territory situated geographically in the Muskoka district. All districts are now interconnected by tie-lines, so that eleven generating stations operate in parallel through one network of transmission lines. The power is transmitted at 22 kv. and 38 kv. and connected through auto-transformers.

Transmission Lines—110 kv., 55.8 miles; 38 kv., 146.92 miles; 26.4 to 6.6 kv., 542.38 miles. Less than 6.6 kv. not included.

Transformation—Total capacity in 77 stations owned by the Commission = step up, 28,650 kv-a. in 7 stations; step down, 32,943 kv-a. in 64 transformer stations; 18,000 kv-a. in 4 auto-transformer stations, and 8,400 kv-a. in 2 frequency changer stations.

GENERATION:

SEVERN DISTRICT

Big Chute Generating Station

Situated at Big Chute, on the Severn river. Formerly the property of the Simcoe Light and Power Company. In operation, 1909. Purchased by the Commission in July, 1914. Water conveyed to forebay by canal and thence to power house by two steel penstocks. Average operating head, 56 ft.

Main Turbines—Three 1,100 h.p. William Hamilton; one 2,300 h.p. Wellman-Seaver-Morgan, horizontal shaft. Total capacity, 5,600 h.p.

Auxiliary Turbines—Two 150 hp. William Hamilton.

Main Generators-Three 900 kv-a. Canadian Westinghouse Company; one 1,600 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,200 volts, horizontal shaft. Total capacity, 4,300 kv-a.

Exciters—Two 100 kw. Canadian Westinghouse, 125 volts, turbine driven.

Transformers—Two banks = six 600 kv-a. Canadian Westinghouse Company, 2.2 to 22 kv. Total capacity, 3,600 kv-a.

EUGENIA DISTRICT

Eugenia Falls Generating Station

Situated at Eugenia Falls, on the Beaver river. Power rights purchased by Commission from Georgian Bay Power Company in 1914. Plant installed by Commission. In operation in November, 1915. Water is conveyed to plant through canal, two wood stave pipe lines and two steel penstocks, each provided with surge tank. Average operating head, 550 ft.

Main Turbines—One 4,000 h.p. Allis-Chalmers; two 2,250 h.p. Escher Wyss, all horizontal shaft. Total capacity, 8,500 h.p.

Main Generators—One 2,820 kv-a., two 1,410 kv-a. Canadian Westinghouse, 3-phase, 60 cycles, 4,000 volts. Total capacity, 5,640 kv-a.

Exciters—One 40 kw., two 30 kw. Canadian Westinghouse direct connected to generators.

Transformers—Two banks = six 900 kv-a. Canadian Westinghouse Company, 4 to 22 kv. Total capacity, 5,400 kv-a.

Hanover Generating Station

Situated in the town of Hanover, on Saugeen river. Formerly owned by Canada Cement Company. In operation about 1900. Purchased by Commission, February, 1929. Water conveyed through canal to head works at power house. Operating head, 17 to 18 ft.

Main Turbines—Two 175 h.p. William Hamilton horizontal shaft. Total capacity, 350 h.p.

Main Generators—Two 150 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 4,000 volts. Total capacity, 300 kv-a.

Exciter—One 13 kw. Canadian General Electric Company, 125 volts.

Southampton Generating Station (not operating)

Situated at Indian Rapids, on Saugeen river, about three miles above Southampton. Formerly owned by Foshay interests. In operation, 1897. Purchased by Commission, 1930. Power house and intake integral with dam. Operating head, 11 ft.

Main Turbines—One 150 h.p. William Hamilton; one 300 h.p. William Kennedy, both vertical shaft. Total capacity, 450 h.p.

Main Generators—One 188 kv-a. Swedish General Electric Company, 2,300 volts; one 200 kv-a. Canadian General Electric Company, 6,600 volts, 3-phase, 60 cycles. Total capacity, 388 kv-a.

Exciters—One 9 kw., one 25 kw. Canadian General Electric Company; one 7½ kw. Canadian Westinghouse Company, 125 volts, belt driven from main units.

Transformers—Three 150 kv-a., 2,300 to 22,000 volts, Maloney Electric Company, single-phase, 60 cycles. Total capacity, 450 kv-a.

Walkerton Generating Station

Situated on Saugeen river, about two miles above the town of Walkerton. Formerly owned by Foshay interests. In operation, 1894. Purchased by Commission, 1930. Water conveyed through canal to head works at power house. Operating head about 12 ft.

Main Turbines—One 275 h.p. William Kennedy; one 300 h.p. Boving, both vertical shaft. Total capacity, 575 h.p.

Main Generators—One 150 kv-a., one 200 kv-a. Swedish General Electric Company, 3-phase, 2,300 volts, direct connected to turbines. Total capacity, 350 kv-a.

Exciters—One 25 kw. Canadian Westinghouse Company, motor driven; one 12 kw., turbine driven, one 20 kw., belt driven from main unit, Swedish General Electric Company, 125 volts.

Transformers—One 750 kv-a. Packard Electric Company, 3-phase, 2.3 to 22 kv. Total capacity, 750 kv-a.

WASDELLS DISTRICT

Wasdells Falls Generating Station

Situated at Wasdells Falls, on the Severn river. Constructed by Commission. In operation, October, 1914. Power house and intake integral with dam. Average operating head, 12 ft.

Main Turbines—Two 600 h.p. Boving, vertical shaft. Total capacity, 1,200 h.p.

Auxiliary Turbine—One 55 h.p. Boving.

Main Generators—Two 400 kv-a. Swedish General Electric Company, 3-phase, 60 cycle, 2,300 volts, vertical shaft. Total capacity, 800 kv-a.

Exciters—One 20 kw., turbine driven, one 30 kw., motor driven, Swedish General Electric Company, 125 volts.

Transformers—two banks = six 150 kv-a. Canadian Westinghouse Company, single-phase, 2.3 to 22 kv. Total capacity, 900 kv-a.

MUSKOKA DISTRICT

Ragged Rapids Generating Station

Situated on the Muskoka, locally known as the Musquash river, about five miles below Bala, with concrete regulating dam on the Moon river. Development completed and first unit came into service October 18, 1938, and second unit November 7, 1938. Operating head, 38 ft.

Turbines—Two 5,200 h.p. Kaplan type, vertical shaft, by S. Morgan Smith-Inglis Company. Total capacity, 10,400 h.p.

Generators—Two 4,500 kv-a. 60 cycles, 200 r.p.m., 6,600 volt Canadian Westinghouse Company, direct connected to turbines. Total capacity, 9,000 kv-a.

Exciters—Two 70 kw. 125-volt, direct connected to generators.

Transformers—One bank = three 3,000 kv-a., single phase, 6,600/38,000 volt Hackbridge Transformer Company of Canada.

South Falls Generating Station

Situated at South Falls, on Muskoka river. Purchased from the municipality of Gravenhurst on November 1st, 1915. Remodelled and enlarged in 1916 and again in 1924. Water conveyed from intake by 3 wood stave pipe lines. Average operating head, 107 ft.

Main Turbines—One 1,000 h.p. William Hamilton; two 2,200 h.p. William Kennedy, all horizontal shaft. Total capacity, 5,400 h.p.

Main Generators—One 750 kv-a Canadian General Electric Company; two 2,000 kv-a. Bruce Peebles, 3-phase, 60 cycles, 6,600 volts, horizontal shaft.

Exciters—Two 18 kw. Bruce Peebles; one 12 kw. Canadian General Electric Company direct connected to main generators; one 20 kw. Canadian General Electric Company, motor driven, 125 volts.

Transformers—Two banks = six 1,200 kv-a., 6.6. to 38 kv.; one bank = three 400 kv-a., 6.6 to 22 kv. Canadian General Electric Company. Total capacity, 8,400 kv-a.

Hanna Chute Generating Station

Situated at Hanna Chute, on the Muskoka river, about half a mile up stream from South Falls plant, and remote controlled from that point. Constructed by Commission. In operation, October, 1926. Power fed at generator voltage to South Falls step-up transformers. Power house and intake integral with dam. Average operating head, 30 ft.

Main Turbine—One 1,550 h.p. Dominion Engineering Works, propeller type, vertical shaft.

Main Generator—One 1,400 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, with thrust bearing on vertical shaft.

Exciters—One 23 kw. direct connected to generator.

Trethewey Falls Generating Station

Situated at Trethewey Falls, on Muskoka river, about 2¼ miles up stream from South Falls plant, and remote controlled from that point. Constructed by Commission. In operation September, 1929. Power fed at generator voltage to South Falls step-up transformers. Power house and intake integral with dam. Average operating head, 35 ft.

Main Turbine—One 2,300 h.p. S. Morgan Smith-Inglis, propeller type, vertical shaft.

Main Generator—One 2,000 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, with spring type thrust bearing on vertical shaft.

Exciters—One 24 kw. direct connected to generator.

BALA DISTRICT

Bala Generating Station No. 1

Situated in the town of Bala, on Muskoka river. Formerly property of Bala Electric Light and Power Company. In operation 1917. Purchased by Commission in 1929. Water from Muskoka lake conveyed through canal to head works at power house. Operating head about 19 ft.

Main Turbines—Two 160 h.p. William Hamilton, horizontal shaft. Total capacity, 320 h.p.

Main Generators—One 125 kv-a., one 150 kv-a. Canadian General Electric, 3-phase, 60 cycles, 2,300 volts. Total capacity, 275 kv-a.

Exciters—One 5 kw. Canadian General Electric Company; one 12.5 kw. Canadian Westinghouse Company, 125 volts, belt driven from main units.

Bala Generating Station No. 2

Situated in the town of Bala, on Muskoka river, a short distance from Bala Station No. 1, and remote controlled from that point. Formerly property of Bala Electric Light and Power Company. In operation 1924. Purchased by Commission in 1929. Water from Muskoka lake conveyed to plant through short flume to head works at power house. Operating head about 19 ft.

Main Turbine—One 400 h.p. William Hamilton, propeller type, vertical shaft.

Main Generator—One 312.5 kv-a. Canadian General Electric, 3-phase, 60 cycles, 2,300 volts. Total capacity, 312.5 kv-a.

Exciter—One 8 kw. Canadian General Electric Company, 125 volts, direct connected to main unit.

Transformers—One bank = three 50 kv-a. Canadian General Electric Company, 2,300 to 13,200 volts. One bank = three 150 kv-a. Moloney Electric Company, 2,300 to 6,600 volts, single-phase, 60 cycles. Total capacity, 600 kv-a.

EASTERN ONTARIO SYSTEM

GENERAL—This system comprises that portion of the province east of the area sserved by the Georgian Bay and Niagara Systems. It is a consolidation of what was formerly the Central Ontario and Trent system with the St. Lawrence, Rideau, Ottawa and Madawaska systems. Power is obtained from developments on the Trent, Madawaska and Mississippi rivers, supplemented with power from the frequency-changer station at Chats Falls development on the Ottawa river, and purchased power from the Gatineau river. The Gatineau power is obtained on contract over a 110 kv. transmission line, owned by the Commission, which connects with the lines of the Gatineau Power Company at the Inter-provincial boundary near the west city limits of Ottawa, and to Chats Falls frequency changer station, and extends to step-down stations at Smiths Falls, Kingston, Cornwall and Trenton, from which it is distributed to the respective districts. The line is tapped near the south-west limits of the city of Ottawa to connect with a step-down station which supplies its share of power to the municipality. Complete interconnection and paralleling of the various generating stations does not normally obtain, but interchange of power between different sections is possible.

The *Central Ontario district* is the most westerly district of the system. Power in this district is obtained from developments on the Trent river and its tributaries. The generators are connected through step-up transformers, and thus operate in parallel through one network of transmission lines. Power is also purchased from the municipality of Campbellford, and in emergencies from the Peterboro Hydraulic Power Company and the Canadian General Electric Company. Originally this area was served by subsidiary companies of the Electric Power Company, but by agreement, March 10, 1916, under the provisions of the Central Ontario Power Act of 1916, the Commission assumed control of the interests and properties of these companies. In addition to the generating and distributing systems these included two waterworks systems, three gas plants, and one pulp mill. The companies included in this agreement were: Auburn Power Company, Limited; Central Ontario Power Company, Limited; City Gas Company of Oshawa, Limited; Cobourg Utilities Corporation, Limited; Cobourg Gas, Light and Water Company; Eastern Power Company, Limited; Light, Heat and Power Company of Lindsay; Napanee Gas Company, Limited; Napanee Water and Electric Company; Northumberland Pulp Company, Limited; Peterboro Radial Railway Company; Port Hope Electric Light and Power Company; Seymour Power and Electric Company, Limited; Sidney Electric Power Company, Limited; Trenton Electric and Water Company, Limited; Tweed Electric Light and Power Company, Limited; Nipissing Power Company, and North Bay Light, Heat and Power Company, Limited; of these the last two are part of the Nipissing system.

The *St. Lawrence district* is the most easterly district of the system. There are no developments owned by the Commission in this district, power being purchased from the Gatineau Power Company. It is delivered at 110,000 volts to the Commission's transformer station at Cornwall, where it is stepped down for transmission through the 44 kv. network to the various municipalities.

The *Rideau district* comprises the area between the Central Ontario and the St. Lawrence districts. Power developed in the district is obtained from developments on the Mississippi river; 1,050 h.p. is also purchased from the Rideau Power Company.

The *Ottawa district* comprises a section of the municipality of Ottawa and adjacent territory. Power first delivered by Commission in July, 1907, subsequent to purchase by municipality, in 1905, from Consumers Electric Company, of distributing system. Three-phase, 60-cycle power is purchased from Ottawa and Hull Power and Manufacturing Company at 11,000 volts, and delivered directly to the municipality.

The *Madawaska district* comprises municipalities in the lower Madawaska and Mississippi and neighbouring Ottawa river valleys. Original developments were made by M. J. O'Brien Company, Limited and its subsidiary, the Galetta Electric Power and Milling Company, Limited. The interests and properties of this company were taken over by the Commission and operation assumed May 31, 1929. Power is obtained from developments on the Madawaska and Mississippi rivers, the transmission voltage on the former being 33 kv. and on the latter 11 kv. The two networks are tied together through transformers at Arnprior transformer station.

TRANSMISSION LINES—110 kv., 270.5 miles; 44 kv., 629 miles; 33 kv., 101.1 miles; 26.4 to 6.6 kv., 115.6 miles.

TRANSFORMATION—Total capacity in 89 stations owned by the Commission = step up, 74,895 kv-a. in 13 stations; step down, 162,558 kv-a. in 7-110 kv. transformer stations and 67 distributing stations.

GENERATION:

CENTRAL ONTARIO DISTRICT

Sidney Generating Station

Situated at Dam No. 2, on Trent river. Formerly property of Electric Power Company. In operation 1911. Commission assumed control 1916. Power house and intake integral with dam. Average operating head, 18.5 ft.

Main Turbines—Four 1,400 h.p. Boving, vertical shaft. Total capacity, 5,600 h.p.

Auxiliary Turbine—One 110 h.p. Boving direct connected to exciter.

Main Generators—Four 937.5 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine. Total capacity, 3,750 kv-a.

Exciters—One 75 kw., turbine driven, one 75 kw., motor driven, Swedish General Electric Company, 125 volts.

Transformers—Three banks = three 3,000 kv-a. Canadian Westinghouse Company, 3-phase, 6.6 to 44 kv. Total capacity, 9,000 kv-a.

Frankford Generating Station

Situated at Dam No. 5, on Trent river. Formerly property of Electric Power Company. In operation 1913. Commission assumed control 1916. Power house and intake integral with dam. Average operating head, 17 ft.

Main Turbines—Four 1,200 h.p. Boving, vertical shaft. Total capacity, 4,800 h.p.

Auxiliary Turbine—One 100 h.p. Boving direct connected to exciter.

Main Generators—Four 812.5 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine. Total capacity, 3,250 kv-a.

Exciters—One 75 kw., turbine driven, one 75 kw., motor driven, Swedish General Electric Company, 125 volts.

Transformers—Power fed at generator voltage to step-up transformers at Sidney transformer station.

Meyersburg Generating Station

Situated at Dam No. 8, on Trent river, about four miles below Campbellford. Constructed by Commission. In operation October, 1924. Remote supervisory control from Ranney Falls plant, about three miles up stream includes fifty-seven possible supervisory operations, and indications of operating conditions at plant. Power house and intake integral with dam. Average operating head, 32 ft.

Main Turbines—Three 2,200 h.p. Allis-Chalmers, vertical shaft. Total capacity, 6,600 h.p.

Main Generators—Three 2,000 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine. Total capacity, 6,000 kv-a.

Exciters—Three 31 kw. Swedish General Electric Company, 115 volts, direct connected to main generators.

Transformers—Three banks = three 2,000 kv-a. Packard Electric Company, 3-phase, 6.6 to 44 kv. Total capacity, 6,000 kv-a.

Hague's Reach Generating Station

Situated at Dam No. 9 on Trent river, about 2¼ miles below Campbellford. Constructed by Commission. In operation March, 1925. Remote supervisory control from Ranney Falls plant, with duplicate equipment to that at Meyersburg plant. Power house and intake integral with dam. Average operating head, 22.5 ft.

Main Turbines—Three 1,600 h.p. Allis-Chalmers, propeller type, vertical shaft. Total capacity, 4,800 h.p.

Main Generators—Three 1,400 kv-a. Canadian Westinghouse Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine. Total capacity, 4,200 kv-a.

Exciters—Three 30 kw. Canadian Westinghouse Company, 125 volts, direct connected to main generators.

Transformers—Three banks = three 1,350 kv-a. Moloney Electric Company, 3-phase, 6.6 to 44 kv. Total capacity, 4,050 kv-a.

Ranney Falls Generating Station

Situated at Dam No. 10 on Trent river, about one mile below Campbellford. Constructed by Commission. In operation August, 1922. Power house and intake integral with dam. Average operating head, 47 ft.

Main Turbines—Two 5,000 h.p. Boving, vertical shaft. Total capacity, 10,000 h.p.

Main Generators—Two 4,500 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine. Total capacity, 9,000 kv-a.

Exciters—Three 50 kw. Canadian General Electric Company, 125 volts, two direct connected to main generators, one motor driven.

Transformers—Two banks = two 4,500 kv-a. Canadian General Electric Company, 3-phase 6.6. to 44 kv. Total capacity, 9,000 kv-a.

Campbellford—Ranney Falls Generating Station, Unit No. 3

Situated on the Trent river, two miles downstream from Campbellford. This unit was formerly a separate development near the main plant, drawing its water supply from the same forebay by a canal and pipe line. Formerly property of the Quinte and Trent Valley Power Company. Commission assumed control in 1937. Operating head, 47 ft.

Turbine—One 1,000 h.p. vertical shaft Leffel turbine, operating at 360 r.p.m., direct connected to a 900 kv-a. Swedish General Electric Company generator.

Generator—One 900 kv-a., 60-cycle, 2,400-volt, direct connected to turbine.

Exciter—8 kw., 125-volt, direct connected to generator.

Transformer—750 kv-a., 3-phase, 2,400/44,000 volts, Canadian General Electric Company.

Seymour Generating Station

Situated at Dam No. 11 on Trent river, about 1½ miles up stream from Campbellford. Formerly property of Electric Power Company. In operation 1910. Commission assumed control, 1916. Power house and intake integral with dam. Average operating head, 23 ft.

Main Turbines—Five 1,100 h.p. William Kennedy, vertical shaft. Total capacity, 5,500 h.p.

Auxiliary Turbine—One 110 h.p. William Kennedy.

Main Generators—Five 750 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,400 volts, direct connected to turbines. Total capacity, 3,750 kv-a.

Exciters—One 60 kw., turbine driven, one 75 kw. motor driven, Canadian General Electric Company, 125 volts.

Transformers—Two banks = two 3,000 kv-a. Canadian Westinghouse Company, 3-phase, 2.4 to 44 kv. Total capacity, 6,000 kv-a.

Heely Falls Generating Station

Situated at Dam No. 14 on Trent river, about five miles up stream from Campbellford. Formerly property of Electric Power Company. In operation 1913. Commission assumed control 1916. Water conveyed from head works through three steel penstocks to turbines. Average operating head, 74 ft.

Main Turbines—Two 5,600 h.p. Escher Wyss; one 5,600 h.p. Wellman-Seaver-Morgan double runner, all horizontal shaft. Total capacity, 16,800 h.p.

Auxiliary Turbine—One 300 h.p. Escher Wyss.

Main Generators—Two 3,750 Canadian General Electric Company; one 3,750 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbines. Total capacity, 11,250 kv-a.

Exciters—Two 160 kw. Canadian General Electric Company, 125 volts, one turbine and one motor driven.

Transformers—Three banks = three 3,750 kv-a. Canadian Westinghouse Company, 3-phase, 6.6 to 44 kv. Total capacity, 11,250 kv-a.

Auburn Generating Station

Situated at Dam No. 18 on Otonabee river, near the city of Peterboro. Formerly property of Electric Power Company. In operation 1911. Commission assumed control 1916. Power house and intake integral with dam. Average operating head, 18.5 ft.

Main Turbines—Three 960 h.p. William Hamilton, horizontal shaft. Total capacity, 2,880 h.p.

Auxiliary Turbine—One 135 h.p. William Hamilton.

Main Generators—Three 625 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, two 6,600 volts, one 2,400 volts, direct connected to turbines. Total capacity, 1,875 kv-a.

Exciters—One 135 kw., turbine driven, one 90 kw., motor driven, Swedish General Electric Company, 125 volts.

Transformers—One bank = three 200 kv-a. Canadian General Electric Company, single-phase, 2.4 to 6.6 kv. Total capacity, 600 kv-a. Fed at 6.6 kv. to Auburn transformer station, where it is stepped up through two 1,875 kv-a. Canadian General Electric Company, 3-phase units, 6.6 to 44 kv.

Fenelon Falls Generating Station

Situated at Dam No. 30, on the Sturgeon river at Fenelon Falls. Formerly property of Electric Power Company. In operation 1899. Commission assumed control 1916. Power house and intake integral with dam. Average operating head, 22.5 ft.

Main Turbines—Two 500 h.p. Samson, horizontal shaft. Total capacity, 1,000 h.p.

Main Generators—Two 400 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 600 volts. Total capacity, 800 kv-a.

Exciter—One 30 kw. Canadian General Electric Co., 125 volts, belt driven.

Transformers—Two banks = six 135 kv-a. Canadian General Electric Company, single-phase air blast, 600 to 11,000 volts. Total capacity, 810 kv-a.

Young's Point Generating Station

Situated on the Otonabee river below Clear lake. Formerly property of Canada Cement Company. Commission assumed control in 1936. Operating head, 7 ft.

Turbine—One 700 h.p. William Hamilton. four single wheels, each set in open flumes and connected through bevel mortice gears to a jack shaft.

Generator—400 kv-a., 60-cycle, 200 r.p.m., 600-volt, Canadian General Electric Company, gear driven by turbine.

Exciter—12 kw., 900 r.p.m. Dick Kerr Company, belt driven from turbine shaft.

Transformers—One bank of three 125 kv-a., 575-11,000 volts, Canadian General Electric Company, and one 500 kv-a., 3-phase, 575-10,500 volts, Packard Electric Company.

Lakefield Generating Station

Situated on Otonabee river at village of Lakefield. Formerly property of Canada Cement Company. Commission assumed control in 1936. Operating head, 16 ft.

Turbine—One 2,300 h.p. Canadian Allis-Chalmers, Limited, vertical shaft.

Generator—2,500 kv-a., 60-cycle, 112.5 r.p.m., 2,400-volt Swedish General Electric Company, direct connected to turbine.

Exciter—38 kw., 125-volt, direct connected to generator.

Transformers—Two 1,500 kv-a., 3-phase, 2,400-44,000 volts, Packard Electric Company; two 2,000 kv-a., 3-phase, 10,500-2,400 volts, Canadian General Electric Company.

Lock 24 Generating Station

Situated on the Otonabee river between Peterborough and Lakefield. Formerly property of Canada Cement Company. Commission assumed control in 1936. Operating head, 12 ft.

Turbine—One 1,000 h.p. William Hamilton, four single vertical wheels, each set in open to flumes and connected through bevel mortice gears to one jack shaft.

Generator—900 kv-a, 60-cycle, 11,600 volt Dick Kerr Company, driven by horizontal shaft turbine.

Exciters—One 20 kw., 125-volt, motor driven or belted to generator shaft, Dick Kerr Company. One 17 kw., 125-volt motor-driven Canadian Westinghouse Company.

Sills Island Generating Station

Situated on the Trent river at Frankford. Formerly property of the Quinte and Trent Valley Power Company. Commission assumed control in 1937. Operating head, 14 ft.

Turbines—Two 1,400 h.p. S. Morgan Smith-Inglis Company, Limited, vertical shaft, propeller turbines, operating at 120 r.p.m.

Generators—Two 1,200 kv-a., 60-cycle, 6,600-volt, 600 r.p.m. Swedish General Electric Company, connected through 1-5 ratio gears to turbines.

Exciters—Two 15 kw., 125-volt, direct connected to generators.

Transformers—One 3,000 kv-a., 3-phase, 6,600-44,000 volts, Canadian General Electric Company.

RIDEAU DISTRICT

High Falls Generating Station

Situated on the Mississippi river, at High Falls, immediately above Dalhousie lake. Constructed by Commission. In operation May, 1920. Water conveyed from head works through wood stave pipe to turbines. Average operating head, 78 ft.

Main Turbines—Three 1,240 h.p. Leffel, horizontal shaft. Total capacity, 3,720 h.p.

Main Generators—Four 350 kv-a., two per turbine, one 875 kv-a. General Electric Company, 3-phase, 60 cycles, 4,400 volts, horizontal shaft, direct connected to turbines. Total capacity, 2,275 kv-a.

Exciters—Three 25 kw. General Electric Co., belt driven.

Transformers—Three banks = three 750 kv-a. Packard Electric Company, 3-phase, 4.16 to 25.4 kv. Total capacity, 2,250 kv-a.

Carleton Place Generating Station

Situated on Mississippi river at Carleton Place. Formerly property of H. Brown and Sons. In operation 1910. Purchased by Commission, May, 1919. Operation discontinued, June, 1920. Renovated and operated as standby since that date. Average operating head, 10.5 ft.

Main Turbines—Three 283 h.p. Leffel, Samson vertical shaft. Total capacity, 849 h.p.

Main Generators—One 150 kv-a., one 250 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,300 volts. Total capacity, 400 kv-a.

Exciters—Two 7 kw. Canadian General Electric Company, belt driven.

Transformers—Power fed at generator voltage to low voltage bus in Carleton Place distributing station.

MADAWASKA DISTRICT

Calabogie Generating Station

Situated on Madawaska river, at lower end of Calabogie lake. Formerly property of M. J. O'Brien, Limited. In operation 1917. Commission assumed control May, 1929. Power house and head works integral with dam. Average operating head, 30 ft.

Main Turbines—Two 3,000 h.p. Allis-Chalmers, horizontal shaft. Total capacity, 6,000 h.p.

Auxiliary Turbine—One 200 h.p. Allis-Chalmers.

Main Generators—Two 2,000 kv-a. Allis-Chalmers, 3-phase, 60 cycles, 6,600 volts, horizontal shaft. Total capacity, 4,000 kv-a.

Exciters—Two 120 kw. Allis-Chalmers, 125 volts, one belted to main unit, one turbine driven.

Transformers—One bank = three 2,000 kv-a. Westinghouse Electric and Manufacturing Company, single-phase, 6.6 to 33 kv. Total capacity, 6,000 kv-a.

Galetta Generating Station

Situated on Mississippi river at Hubbells Falls, about four miles from Arnprior. Formerly property of Galetta Power and Milling Company. In operation 1907. Commission assumed control May, 1929. Power house and head works integral with dam. Average operating head, 22 ft.

Main Turbines—One 700 h.p. William Kennedy; one 700 h.p. Boving, horizontal shaft. Total capacity, 1,400 h.p.

Auxiliary Turbines—Two 50 h.p., driving exciters.

Main Generators—Two 400 kv-a. Canadian Westinghouse Company, 3-phase, 60 cycles, 2,300 volts, horizontal shaft, direct connected to turbines. Total capacity, 800 kv-a.

Exciters—Two 30 kw. Canadian Westinghouse Company, 125 volts, connected to auxiliary turbine.

Transformers—One bank = three 1,500 kv-a. Canadian Westinghouse Company, single-phase, 2.3 to 33 kv.; one bank = two 125 kv-a., two 60 kv-a. Canadian Westinghouse Company, single-phase, 2.3 to 11 kv. Total capacity, 4,870 kv-a.

THUNDER BAY SYSTEM

General—This system comprises that portion of the district of Thunder Bay adjacent to lake Superior, and includes the lake-head cities of Port Arthur and Fort William. Power is obtained from developments on the Nipigon river.

Transmission Lines—110 kv., 260.3 miles; 44 kv., 116.4 miles; 22 kv., 0.35 miles; 12 kv., 1.45 miles.

Transformation—Total capacity in 13 stations = step up, 121,500 kv-a. in 3 stations; step down, 78,913 kv-a. in 10 stations.

Generation:

Cameron Falls Generating Station

Situated at Cameron Falls, on the Nipigon river. Constructed by the Commission, and first unit placed in operation in December, 1920. Power house and head works integral with dam. Water conveyed from head works to turbine through reinforced concrete intake pipes, three for each unit, approximately 50 ft. in length and 13 ft. by 10 ft. in cross section. Normal operating 72 ft.

Main Turbines—Two 12,500 h.p. I.P. Morris; two 12,500 h.p. Allis-Chalmers; two 12,500 h.p. Canadian Vickers, all vertical shaft. Total capacity, 75,000 h.p.

Main Generators—Two 10,600 kv-a. Canadian Westinghouse Company; four 10,600 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 12,000 volts, vertical shaft. Total capacity, 63,600 kv-a.

Exciters—Six 125 kw. direct connected to main generators; one 125 kw. motor driven.

Transformers—Three banks = nine 8,000 kv-a. Canadian General Electric Company, single-phase, 12 to 63.5 kv., to operate 110 kv., star connected. One bank = three 1,500 kv-a. Canadian Westinghouse Company, single-phase, 12 to 44 kv. Total capacity, 76,500 kv-a.

Alexander Generating Station

Situated on Nipigon river, about 1½ miles below Cameron Falls station, and remote controlled from that point. Constructed by Commission, and first unit in operation October, 1930. Water conveyed through short intake canal to head works at power house. Head pond created by large earth dam, dykes and concrete sections. Normal operating head, 60 ft.

Main Turbines—Three 18,000 h.p., S. Morgan Smith-Inglis, vertical shaft. Total capacity, 54,000 h.p. Provision made for installation of a fourth unit.

Main Generators—Three 15,000 kv-a. Canadian General Electric Company, 3-phase, 60 cycles 12,000 volts, vertical shaft. Total capacity, 45,000 kv-a.

Exciters—Three 165 kw. Canadian General Electric Company, 250 volts, direct connected to main units.

Transformers—Three banks = three 15,000 kv-a. Canadian General Electric Company, 3-phase, 12 to 110 kv. Total capacity, 45,000 kv-a.

NORTHERN ONTARIO PROPERTIES

General—Five districts, viz., Nipissing, Sudbury, Abitibi, Patricia and St. Joseph, at present independent, serve portions of Northern Ontario. The properties in these districts are owned by the Province and operated on behalf of the Ontario Government by The Hydro-Electric Power Commission.

The *Nipissing district* has been operated by the Commission for a number of years, and includes municipalities lying immediately to the east of lake Nipissing. Power is obtained from developments on the South river. Power rights and plant formerly owned by Nipissing Power Company, controlled by Electric Power Company, Limited. Commission assumed control March, 1916, when the latter Company and all its subsidiaries were acquired by the Ontario Government.

The *Sudbury district* serves the territory adjacent to the city of Sudbury, including the mining area known as Sudbury Basin. Power is obtained from developments on the Wanapitei river. Power rights and plant formerly owned by the Wahnapitae Power Company. Control assumed by Commission April, 1930.

The *Abitibi district* comprises the area that can be served from a 132,000-volt transmission line extending from the Abitibi Canyon power development to Sudbury. Power at 25 cycles is transmitted from developments on the Abitibi river and delivered to the International Nickel Company.

The *Patricia district* was established to supply power to the Red Lake mining district. Power is obtained from a development on the English river.

The *St. Joseph district* was established to supply power to Central Patricia and Pickle Crow Mining Companies. Power is obtained from a development on the Albany river.

TRANSMISSION LINES—132 kv., 552.93 miles; 44 kv., 40.56 miles; 33 kv., 6.83 miles; 26.4 to 13.2 kv., 248.70 miles.

TRANSFORMATION—Total capacity in 31 stations owned by the Commission = step up, 229,725 kv-a. in 10 stations; step down, 109,798 kv-a. in 21 stations.

GENERATION:

NIPISSING DISTRICT

Nipissing Generating Station

Situated on the South river, about 1½ miles from the village of Nipissing. Formerly the property of Nipissing Power Company. Control assumed by Commission March, 1916. Water conveyed to plant through canal, wood stave pipe line and steel penstock provided with surge tank. Average operating head, 90 ft.

Main Turbines—Two 1,250 h.p. Jenckes Machine Company, horizontal shaft. Total capacity, 2,500 h.p.

Main Generators—One 1,400 kv-a. Canadian Westinghouse Company; one 1,250 kv-a. Swedish General Electric Company, 3-phase, 2,300 volts. Total capacity, 2,650 kv-a.

Exciters—One 17.5 kw. Swedish General Electric Company, 115 volts; one 21 kw. Canadian Westinghouse Company, 125 volts, direct connected to main generators; one 37½ kw. motor driven.

Transformers—One bank = three 900 kv-a. Packard Electric Company, single phase, 2.3 to 22 kv. Total capacity, 2,700 kv-a.

Bingham Chute Generating Station

Situated on South river, about two miles from Powassan. Constructed by Commission. In operation December, 1923. Water conveyed to plant through wood stave pipe line. Average operating head, 47 ft.

Main Turbines—Two 650 h.p. William Kennedy, horizontal shaft. Total capacity, 1,300 h.p.

Main Generators—Two 450 kv-a. Canadian Westinghouse Company, 3-phase, 60 cycles, 2,200 volts.

Exciters—Two 12.5 kw. Canadian Westinghouse Company, direct connected to main generators.

Transformers—One bank = three 300 kv-a. Canadian Westinghouse Company, single-phase, 2.2 to 22 kv. Total capacity, 900 kv-a.

Elliott Chute Generating Station

Situated on South river, approximately 1½ miles up stream from Bingham Chute plant. Constructed by Commission. In operation October, 1929. Semi-automatic. Remote controlled from Bingham Chute station. Water conveyed to plant through wood stave pipe line. Average operating head, 39 ft.

Main Turbine—One 1,800 h.p. S. Morgan Smith-Inglis Company, propeller type, vertical shaft.

Main Generator—One 1,800 kv-a. Swedish General Electric Company, 3-phase, 60 cycles, 2,300 volts, direct connected to turbine.

Exciter—One 22 kw. Swedish General Electric Company, direct connected, 125 volts.

Transformers—One bank = three 650 kv-a. English Electric Company, single phase, 2.3 to 23 kv. Total capacity, 1,950 kv-a.

SUDBURY DISTRICT

Coniston Generating Station

Situated on Wanapitei river, approximately ten miles east of Sudbury. Formerly property of Wahnapitae Power Company. In operation 1905. Commission assumed control April, 1930. Water conveyed through canal to head works. Steel penstocks to turbines. Average operating head, 53 ft.

Main Turbines—One 1,200 h.p., one 1,600 h.p. Jenckes; one 3,500 h.p. Allis-Chalmers, all horizontal shaft. Total capacity, 6,300 h.p.

Auxiliary Turbines—One 35 h.p., one 70 h.p. Total capacity, 105 h.p.

Main Generators—One 800 kv-a., one 1,250 kv-a., one 2,500 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,300 volts. Total capacity, 4,550 kv-a.

Exciters—One 25 kw., one 55 kw., turbine driven, one 100 kw., motor driven, Canadian General Electric Company.

Transformers—Two banks = six 800 kv-a. Canadian General Electric Company, single-phase, water-cooled, 2,300 to 23,000 volts. Total capacity, 4,800 kv-a.

McVittie Generating Station

Situated on Wanapitei river, approximately 26 miles from Sudbury. Formerly property of Wahnapitae Power Company. In operation 1912. Commission assumed control April, 1930. Water conveyed through canal to head works. Steel penstocks to turbines. Average operating head, 38 ft.

Main Turbines—Two 1,800 h.p. William Kennedy, horizontal shaft. Total capacity, 3,600 h.p.

Auxiliary Turbine—One 75 h.p.

Main Generators—Two 1,250 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,300 volts. Total capacity, 2,500 kv-a.

Exciters—Two 75 kw. Canadian General Electric Company, one direct connected to auxiliary turbine, one motor driven.

Transformers—One bank = three 625 kv-a. Canadian General Electric Company, single-phase, water-cooled, 2,300 to 23,000 volts. Total capacity, 1875, kv-a.

Stinson Generating Station

Situated on Wanapitei river, approximately eight miles up stream from Coniston generating station. Formerly property of Wahnapitae Power Company. In operation 1925. Commission assumed control April, 1930. Water conveyed through canal to head works. Steel penstocks to turbines. Average operating head, 52.5 ft.

Main Turbines—Two 3,500 h.p. Allis-Chalmers, horizontal shaft. Total capacity, 7,000 h.p.

Auxiliary Turbine—One 150 h.p.

Main Generators—Two 2,500 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,300 volts. Total capacity, 5,000 kv-a.

Exciters—One 100 kv-a., turbine driven, one 100 kv-a., motor driven, Canadian General Electric Company, 125 volts.

Transformers—One bank = three 1,667 kv-a. Canadian General Electric Company, single-phase, water cooled, 2,300 to 23,000 volts. Total capacity, 5,000 kv-a.

Crystal Falls Generating Station

Situated on the Sturgeon river about ten miles up stream and north of the town of Sturgeon Falls. Formerly property of the Abitibi Power and Paper Company. Commission assumed control in August, 1937. Normal operating head, 33 ft.

Main Dam—Concrete gravity type; includes two 20-ft. sluices controlled by Taintor gates 14 ft. by 20 ft., also one log slide and three spillways with a total length of 54 ft.

Main Turbines—Four 2,600 h.p. I.P. Morris vertical-shaft Francis turbines, each in concrete spiral casing.

Main Generators—Four 2,125 kv-a. Westinghouse Electric Company generators, 3-phase, 60 cycle, 138.5 r.p.m., 2,300 volt, each direct connected to turbine.

Exciters—One 68 kw., 125 volt, 1,150 r.p.m. motor driven Canadian Westinghouse Company.

Transformers—Three 3,000 kv-a, 1-phase, 2,300/22,000 volts, Canadian Westinghouse Company.

ABITIBI DISTRICT

Abitibi Canyon Generating Station

Situated on the Abitibi river approximately seventy miles north of Cochrane. Formerly property of the Ontario Power Service Corporation. Commission assumed control April, 1933, and completed installation of two generators which were placed in operation in May and December, 1933. The development was constructed for ultimate installation of five units. Water conveyed from head works to turbines through steel-plate penstocks, 18 ft. in diameter. Normal operating head, 237 ft.

Main Turbines—Five 66,000 h.p. Canadian Allis-Chalmers, vertical shaft.

Auxiliary Turbines—One 600 h.p. Canadian Allis-Chalmers.

Main Generators—Five 48,500 kv-a., Canadian General Electric Company, 3-phase, 25 cycle, 13,800 volts. Installed capacity, 242,500 kv-a.

Auxiliary Generator—One 500 kv-a., Canadian General Electric Company.

Main Exciters—180 kw., 250 volts, direct connected to main generators.

Sub-Exciters—7 kw., 250 volts, direct connected to main exciters.

Transformers—Four banks, each three 16,000 kv-a., 13,800 delta/132,000 volt star, Canadian General Electric Company. Installed capacity, 192,000 kv-a.

PATRICIA DISTRICT

Ear Falls Generating Station

Situated at Ear Falls on the English river. Constructed by Commission. In operation December, 1929. Water conveyed from Lac Suel conservation dam to power house through four wood stave pipes. Normal operating head, 36 ft.

Main Turbines—One 5,000 h.p. Dominion Engineering Works, vertical shaft; one 5,000 h.p. Morgan-Smith-Inglis, vertical shaft.

Main Generators—One 5,000 kv-a. Canadian Westinghouse Company, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine; one 4,500 kv-a. Ateliers de Construction Oerlikon, 3-phase, 60 cycles, 6,600 volts, direct connected to turbine.

Exciters—One 65 kw. Canadian Westinghouse Company, 125 volts, direct connected· one 48 kw. Ateliers de Construction Oerlikon, 125 volts, direct connected.

Transformers—One bank = three 750 kv-a., 6.6 to 44 kv., single-phase, English Electric Company; one bank = three 750 kv-a., 6.6 to 44 kv., single-phase, Commonwealth Electric Corporation; one bank = three 1,500 kv-a., 6.6 to 44 kv., single-phase, Moloney Electric Company. Total capacity, 9,000 kv-a.

ST. JOSEPH DISTRICT

Rat Rapids Generating Station

Situated at Rat Rapids at the outlet of lake St. Joseph, on the Albany river. Constructed by Commission. In operation March, 1935. Concrete turbine chamber and generating room substructure. Rock filled timber crib dams. Average operating head, 14.5 ft.

Main Turbines—One 1,200 h.p. Allis-Chalmers, quadruple runner, horizontal shaft; one 1,750 h.p. Dominion Engineering Works, vertical shaft.

Main Generators—One 2,000 kv-a. Allis-Chalmers, 3-phase, 60 cycles, 6,600 volts, horizontal shaft; one 1,500 kv-a. Canadian General Electric Company, 3-phase, 60 cycles, 2,300 volts, vertical shaft. Total capacity, 3,500 kv-a.

Exciter—One 45 kw., Canadian Westinghouse belt driven from generator shaft.

Transformers—One bank = three 333 kv-a., Packard Electric Company, 6.6 to 22 kv., single-phase, 60 cycles; one bank = three 500 kv-a., Packard Electric Company, 2.3 to 22 kv., single-phase, 60 cycles. Total capacity, 2,500 kv-a.

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PROVINCIAL AUDITOR'S REPORT

1937-38

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 27

ONTARIO

TORONTO
Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty
1939

TO THE HONOURABLE ALBERT MATTHEWS,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to Your Honour the Report of the Provincial Auditor for the year ended March 31st, 1938.

Respectfully submitted,

M. F. HEPBURN,
Treasurer.

Treasury Department, Ontario,
January 15th, 1939.

PROVINCIAL AUDITOR'S OFFICE,

January 15th, 1939.

THE HONOURABLE M. F. HEPBURN,
Provincial Treasurer.

SIR: I have the honour to submit, for the information of the Legislative Assembly, my report for the year ended March 31st, 1938, in accordance with the requirements of the Audit Act.

Respectfully submitted,

H. A. COTNAM, C.A.,
Provincial Auditor.

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A

LEGAL OPINIONS

A

LEGAL OPINIONS

Re Refund of Contributions to the Public Service Superannuation Fund

OFFICE OF PROVINCIAL AUDITOR

Toronto, July 19th, 1937.

Memorandum for MR. CLIFFORD MAGONE,
Acting Deputy Attorney-General.

I am submitting to you for your legal opinion a point which has arisen in connecting with an application by a former Civil Servant for a refund of monies, plus interest which is lying at his credit in the Superannuation Fund.

The particular case in point is, that the employee above referred to was dismissed from the Service for theft, was arrested, tried and convicted and was sentenced to 6 months imprisonment.

May I therefore, ask that you let me have a legal opinion, as to whether the monies in the Fund belonging to this ex-Civil Servant could properly and legally be refunded to him in view of the fact that under a Judgment of the Supreme Court he was found guilty of theft and was indebted to the Province for a considerable sum. (See sec. 36, S.S. 2 of the Public Service Act, 1935).

The Bonding Company only paid a portion of his defalcations.

I would appreciate your ruling at your earliest convenience.

(Sgd.) G. A. BROWN,
Provincial Auditor.

DEPARTMENT OF THE ATTORNEY-GENERAL OF ONTARIO
OFFICE OF THE MINISTER

Toronto, August 31, 1937.

Memorandum for MR. GORDON A. BROWN,
Provincial Auditor.

Under date of July 19th you addressed a memorandum to Mr. Magone, then Acting Deputy Attorney-General, in which you requested an opinion on the matter therein set out, in short a question whether an ex-employee of the Crown, who is indebted to the Crown, is entitled to be refunded the monies standing to his credit in the Superannuation Fund.

Subsection 2, of section 36 of The Public Service Act, as enacted by 23 Geo. V. 1933, Chap. 52, section 5 (2) reads as follows:

> "2. When an employee leaving the public service is indebted to the Province, payment of the amount owing shall be deducted from any refund to which he may be entitled."

In view of this specific statutory direction, I am of opinion that no superannuation monies should be refunded until the total amount of the defalcations as found has been deducted from the sum credited to his account in the fund. I am therefore necessarily of the view that the theft of Provincial monies has created an indebtedness to the Province within the meaning of the above quoted subsection.

(Sgd.) L. R. MACTAVISH,
Legal Secretary.

Re Section 10 of the Legislative Assembly Act

OFFICE OF PROVINCIAL AUDITOR

Toronto, January 20th, 1938.

MR. W. B. COMMON, K.C.,
Acting Deputy Attorney-General,
Buildings.

Dear Mr. Common:

An account, covering the purchase of two tons of coal, has been presented to this Office for payment by the Department of Agriculture. The firm from whom the coal was purchased is a proprietorship carrying on business under a trade name, but the sole owner of the firm is a member of the Legislative Assembly of the Province of Ontario.

May I ask if you would kindly let me have a legal opinion as to whether this firm is precluded from transacting business with the Province of Ontario pursuant to the provision of the Legislative Assembly Act, R.S.O. 1927, Chap. 12.

Yours very truly,

(Sgd.) H. A. COTNAM,
Acting Provincial Auditor.

DEPARTMENT OF ATTORNEY-GENERAL

Toronto, Ontario, January 21, 1938.

H. A. COTNAM, ESQ.,
Acting Provincial Auditor,
Parliament Buildings, Toronto.

My dear Sir:

I have your letter of January 20th.

It is my opinion that, pursuant to section 10 of the Legislative Assembly Act, that a member of the legislature who contracts to sell coal to His Majesty the King, or with any public officer or department, with respect to the public service of Ontario, or under which any public money of Ontario is to be paid, would be disqualified.

Yours faithfully,

(Sgd.) W. B. COMMON,
Acting Deputy Attorney-General.

Re Payment of Subsidy to the Town of Frood Mine

OFFICE OF PROVINCIAL AUDITOR

Toronto, March 28th, 1938.

MR. W. B. COMMON, K.C.,
Acting Deputy Attorney-General,
Parliament Buildings.

Dear Mr. Common:

The Municipal Subsidy Act, R.S.O. 1937, Chap. 273, provides for payment out of the Consolidated Revenue Fund of a subsidy to a municipal corporation where rates are levied for general municipal taxation.

The Town of Frood Mine has no general municipal taxation other than a levy for school purposes.

I would very much appreciate a ruling from you as to whether a subsidy can be paid out of the Consolidated Revenue Fund to the Town of Frood Mine.

Yours very truly,

(Sgd.) H. A. COTNAM,
Acting Provincial Auditor.

DEPARTMENT OF ATTORNEY-GENERAL

Toronto, Ontario, March 30th, 1938.

H. A. COTNAM, ESQ.,
Acting Provincial Auditor,
Parliament Buildings, Toronto.

My dear Mr. Cotnam:

I have your letter of March 28th.

The Town of Frood Mine was incorporated by private act in 1930. This is a company town and has no general municipal taxation.

By section 1 of the Municipal Subsidy Act, R.S.O. 1937, chap. 273, general municipal taxation appears to be necessary before a subsidy can be granted. The purpose of the subsidy is to reduce the general municipal tax rate. It would seem, therefore, that a general municipal taxation is necessary before any municipality can take advantage of a municipal Subsidy Act, and such Act would not apply to the town of Frood Mine.

Yours faithfully,

(Sgd.) W. B. COMMON,
Senior Solicitor,
Attorney-General's Department.

B

TREASURY BOARD MINUTES

B

TREASURY BOARD MINUTES

STATEMENT OF TREASURY BOARD MINUTES ISSUED FOR EXPENDITURES IN EXCESS OF APPROPRIATIONS DURING THE FISCAL YEAR ENDED MARCH 31st, 1938

Department of Agriculture

	Warrant	Expended
Commissioner of Marketing—		
Loans in accordance with the Co-operative Marketing Loan Act..$	9,000 00	$ 6,500 00
Department of Attorney-General		
Main Office—		
Commissions and sundry investigations	14,000 000	12,688 29
Revision of Statutes	10,000 00	9,878 62
Supreme Court of Ontario—		
Master's Office, salaries	1,500 00	1,458 33
Registrar's Office, salaries	350 00	316 62
Office of Toronto and York Crown Attorney, salaries	2,000 00	1,999 76
Office of Land Titles, salaries	950 00	941 66
Office of Audit of Criminal Justice Accounts—		
Districts,		
Salaries	3,500 00	3,005 64
General Administration of Justice	30,000 00	24,336 44
Magistrates, salaries	8,550 00	8,545 72
Office of Public Trustee—		
Salaries	2,000 00	1,974 40
Maintenance	600 00	437 56
Office of Fire Marshal—		
Salaries	600 00	595 83
Travelling expenses	1,500 00	814 49
Maintenance	1,100 00	1,015 54
Law Enforcement Branch—		
Salaries	135,000 00	128,955 31
Maintenance	36,200 00	34,202 76
Ontario Securities Commission—		
Salaries	5,400 00	5,130 35
Services	10,000 00	9,054 02
Department of Education		
Public and Separate School Education—		
Assisted Public and Separate Schools, grants, etc.	40,000 00	39,987 97
High Schools and Collegiate Institutes Branch—		
Grants: High Schools, etc., including districts	160,000 00	157,677 00
Department of Game and Fisheries		
Erecting ponds, buildings, etc.	12,000 00	10,554 53
Department of Health		
Preventable Diseases Branch—		
Outbreaks of diseases, etc.	50,000 00	48,839 20
Laboratory Branch—		
Travelling expenses	300 00	167 34
Maintenance	3,000 00	798 44
Hospitals Branch—		
Special grants to municipalities in territorial districts	15,000 00	14,979 16
Department of Lands and Forests		
Forests Branch—		
Reforestation, salaries	30.000 00	29,861 07
Department of Legislation		
Office of the Speaker—		
Indemnities—members, including mileage	7,600 00	7,598 20
Legislative Committee for art purposes	1,150 00	1,147 50
Office of Law Clerk—		
Salaries	2,660 00	2,394 17
Office of Crown in Chancery—		
Maintenance	100 00	69 26

Department of the Prime Minister

	Warrant	Expended
Main Office—		
Salaries	500 00	490 12
Maintenance	700 00	685 17
Office of Executive Council—		
Salaries	500 00	458 33
Maintenance	400 00	391 30
Travel and Publicity Bureau—		
Salaries	2,100 00	2,100 00
Printing and distributing booklets, etc.	9,350 00	9,324 09
Office of Civil Service Commissioner—		
Salaries	1,300 00	1,264 10
Maintenance	200 00	133 75
Office of the King's Printer—		
Salaries	1,803 70	1,803 70
Official Gazette	1,500 00	888 42

Department of Provincial Secretary

Main Office, salaries	2,500 00	1,826 59
Registrar General's Branch, salaries	1,600 00	1,558 89
Reformatories and Prisons Branch—		
Main Office:		
Salaries	1,500 00	1,365 62
Industrial Schools	5,000 00	4,961 75
Ontario Reformatories:		
Guelph:		
Salaries	25,000 00	23,451 65
General maintenance	38,000 00	34,042 68
Repairs to buildings, etc.	13,000 00	12,776 96
Industries	120,000 00	95,197 09
Mimico:		
Salaries	2,000 00	534 24
General maintenance	3,000 00	2,450 34
Repairs to buildings, etc.	4,500 00	2,800 38
Industries	3,700 00	3,373 06
Mercer, Toronto:		
Salaries	3,776 20	3,776 20
General maintenance	3,700 00	3,559 35
Industries	40,000 00	39,523 51
Industrial Farm, Burwash:		
Salaries	30,000 00	28,209 43
General maintenance	36,000 00	35,556 52
Additions, alterations and equipment	16,000 00	15,422 62
Industries	7,500 00	6,805 70
Ontario Training School for Boys, Bowmanville:		
Operating expenses	15,500 00	15,260 45
Maintenance and repairs to buildings, etc.	3,000 00	2,988 24
Ontario Training School for Girls, Galt:		
Operating expenses	500 00	46 04
Maintenance and repairs to buildings, etc.	3,000 00	1,998 73

Department of Provincial Treasurer

Main Office, salaries	5,300 00	5,146 77
Amusements Revenue Branch, salaries	13,000 00	12,382 22
Controller of Revenue Branch—		
Salaries	45,000 00	44,706 52
Travelling expenses	19,500 00	19,437 93
Fees	28,000 00	25,438 34
Post Office—		
Salaries	2,000 00	1,870 56
Maintenance	8,000 00	6,714 16

Department of Public Welfare

Main Office—		
Grant, Soldiers' Aid Commission	10,357 00	10,357 00

Department of Public Works

Main Office—		
Salaries	16,000 00	12,677 89
Insurance and lightning rods	5,000 00	5,000 00

Public Buildings, maintenance and repairs—		
General superintendence, salaries	2,400 00	2,126 52
Legislative and Departmental Buildings:		
Salaries	6,500 00	6,282 44
Cleaning of buildings, etc.	56,800 00	54,234 90
Maintenance, repairs, etc.	30,000 00	29,523 59
Total Treasury Board Minutes	$1,239,046 90	$1,156,849 04

C

SPECIAL WARRANTS

C
SPECIAL WARRANTS

STATEMENT OF SPECIAL WARRANTS ISSUED DURING THE FISCAL YEAR ENDED MARCH 31st, 1938

Date of Warrant	SERVICE		Warrants	Expended 1937-38	Unexpended
	Department of Agriculture				
September 7th, 1937	Purchase of building from the Empire Foods Corporation Ltd. at New Liskeard, to be used as a warehouse for storage, grading and marketing of farm products		$3,320 90	$3,320 90	
September 21st, 1937	Grant to the Village of Coldwater to assist in establishing a community park and athletic field, $2,000.00, and a grant to the Creemore Community Park Committee, $829.50		2,829 50	2,829 50	
December 17th, 1937	Temiskaming Producers' Co-operative Company, Ltd., New Liskeard, for repairing and equipping building purchased from the Empire Foods Corporation Ltd.		1,679 10	1,679 10	
December 17th, 1937	Grant to the Village of Lucknow to assist in the building of a Community Hall		2,000 00	2,000 00	
	Department of Attorney-General				
	To supplement incomes of Sheriffs, Local Registrars and Local Masters of Titles, etc.—				
June 23rd, 1937	Warrant	$5,627 60			
October 12th, 1937	"	712 72			
December 8th, 1937	"	485 00	6,825 32	6,825 32	
	Rewards in connection with bush and forest fires in the Province of Ontario—				
September 7th, 1937	Warrant	$3,000 00			
November 30th, 1937	"	1,000 00	4,000 00	3,600 00	400 00
September 7th, 1937	Payment to the estate of Mrs. M. Williams of cash bail lodged with A. M. Judd		500 00	500 00	

November 19th, 1937	Payment of honorariums, services, expenses, etc., in connection with the preparation of briefs and attendance at hearings before the Royal Commission appointed to re-examine the basis of Confederation		5,000 00	4,367 83	632 17
November 23rd, 1937	Reward for information leading to arrest and conviction of Victor Gray, for the murder of Sergeant Frederick Davidson of the Sudbury Police Department		750 00	750 00	
	Department of Education				
June 29th, 1937	Grant to Lincoln Music Association		100 00	100 00	
June 29th, 1937	Grant to the Canadian Bureau for the advancement of Music		500 00	500 00	
	Department of Game and Fisheries				
November 1st, 1937	Grant to the Ontario Fur Farmers Association for the advancement of the fur farming industry and to defray costs of their exhibit at the Royal Winter Fair		4,500 00	4,500 00	
	Department of Health				
April 17th, 1937	Grant to Michipicoten, Goudreau Mining District Hospital campaign		1,000 00	1,000 00	
	Grant to the Village of Portsmouth towards the cost of maintenance of Mowat Ave.—				
June 23rd, 1937	Warrant	$200 00			
September 29th, 1937	"	350 00	550 00	550 00	
July 22nd, 1937	The St. Lawrence Sanatorium, 50% of the amount required to complete the institution and to provide a residence for the nursing staff		34,235 50	34,235 50	
July 22nd, 1937	Freeport Sanatorium, Kitchener, to assist in financing an addition to the institution		19,000 00	19,000 00	
July 22nd, 1937	The Canadian Red Cross Society for the establishment of a Red Cross Outpost at Armstrong, Ontario		2,000 00	2,000 00	
July 22nd, 1937	Payment of Physicians to immunize children in unorganized territory against communcable diseases		7,500 00		7,500 00
July 22nd, 1937	Toronto General Hospital, for the purchase of Deep Therapy X-Ray equipment required by the Ontario Institute of Radio Therapy, Toronto		35,000 00	35,000 00	
August 23rd, 1937	The Toronto Hospital for Consumptives, Weston, to assist in financing an addition to the Institution		100,000 00	100,000 00	

SPECIAL WARRANTS—Continued

Date of Warrant	SERVICE		Warrants	Expended 1937-38	Unexpended
September 14th, 1937	Ontario Society for Crippled Children Incorporated, to assist in the prevention of crippling re epidemic of Poliomyelitis		6,000 00	6,000 00	
September 14th, 1937	Assistance re additions to Fort William, The Mountain, Queen Alexandra and Essex County Sanatoria		425,000 00	425,000 00	
October 18th, 1937	Special grant toward the reconstruction and enlargement of the Porcupine General Hospital, South Porcupine		10,000 00	10,000 00	
October 28th, 1937	Special grants to St. Joseph's Hospital and A. A. Jackson, Sudbury, and Kenora General Hospital re injured transient indigents		420 00	420 00	
	Department of Highways				
May 10th, 1938	Equipment, instruments, scows, boats, rubber boots, motor trucks, cars; lockmasters, bridge tenders, caretakers, etc.; maintenance of locks, dams, bridges, etc.; wages and expenses of supervising foremen; cutting and purchase of timber and construction materials; municipal bridges, municipal drainage and storage dams		75,000 00	73,604 69	1,395 31
	Department of Labour				
May 15th,1937	Allied county Trades and Labour Council, to assist in the Convention of of the Trades and Labour Congress of Canada		500 00	500 00	
June 23rd. 1937	Industry and Labour Board, salaries of members, temporary salaries, office equipment and supplies and travelling expenses		35,000 00	29,283 55	5,716 45
August 23rd, 1937	National Labour Day Committee, Toronto, special grant		100 00	100 00	
August 23rd, 1937	International Labour Day Celebration Committee, special grant		300 00	300 00	
August 24th, 1937	Warriors' Day Council, grant for their Labour Day Parade		250 00	250 00	
	Dominion Provincial Youth Training Programme, services, grants and expenses—				
September 1st, 1937	Warrant	$100,000 00			
November 30th, 1937	"	140,000 00	240,000 00	151,949 92	88,050 08

	J. L. Cohen, barrister, for services rendered in connection with the Textile Investigation, carried on by the Industry and Labour Board—				
December 10th, 1937	Warrant	$1,500 00			
February 14th, 1938	"	2,386 45	3,886 45	3,886 45	
	Department of Lands and Forests				
	To cover costs of surveying the diversion of the waters of Long Lake in a southerly direction—				
	Balance unexpended, 1936-37		5,185 47	5,162 16	23 31
September 14th, 1937	Long Point Park Commission, to cover costs of improvements		1,000 00	1,000 00	
September 21st, 1937	To pay 44% of wages outstanding re the Blind River Pine Co., Ltd.		3,209 80	3,209 80	
	Lieutenant-Governor's Office				
April 17th, 1937	Hon. H. A. Bruce, Lieutenant-Governor, expenses attending the Coronation of His Majesty King George VI		4,000 00	4,000 00	
	Department of Municipal Affairs				
June 23rd, 1937	G. T. Murray, compensation for loss of automobile totally destroyed in an accident while on official business for the Department		450 00	450 00	
September 7th, 1937	National Trust Co., Ltd., and Toronto General Trusts Corporation in payment of out-of-pocket expenses re work on financial position of various Toronto Suburban Municipalities		14,414 13	14,414 13	
	Department of Provincial Secretary				
June 1st, 1937	R. S. Clark and L. J. Long, honorarium for special services re the Ontario Board of Parole		2,000 00	2,000 00	
July 22nd, 1937	Industrial Refuge, Toronto, to assist in construction of a custodial wall across the south end of their property		250 00	250 00	
	Department of Provincial Treasurer				
June 1st, 1937	MacLaren Advertising Company, Ltd., Toronto, in payment of advertising of the Province of Ontario Financial Statement for the fiscal year ended March 31st, 1937		25,000 00	24,838 20	161 80

SPECIAL WARRANTS—Continued

Date of Warrant	SERVICE		Warrants	Expended 1937-38	Unexpended
June 23rd, 1937	Payment of a loan to the Thedford Cold Storage Co., Ltd., a co-operative cold storage association		36,125 00	1,972 11	34,152 89
July 22nd, 1937	A. T. Leavitt, Bronte, Ontario, services and expenses in connection with the Succession Duty Investigation into the Byrnes Estate		1,000 00	1,000 00	
	Department of Public Welfare				
May 27th, 1937	Grant to Mrs. Leith H. Spence, as a gratuity on account of the death of her husband who was accidentally shot		1,000 00	1,000 00	
June 23rd, 1937	Grant to the Ontario Society for Crippled Children		6,000 00	6,000 00	
September 29th, 1937	St. Michael's Hospital, Toronto, one-third of labour costs re construction of a new wing		54,000 00	54,000 00	
November 23rd, 1937	To provide memorial wreaths for Community Remembrance Day Services in the Province of Ontario		2,225 00	2,218 75	6 25
	Department of Public Works				
	Expenses in connection with the construction of a Comfort Station at Port Burwell, in the County of Elgin—				
September 29th, 1937	Warrant	$5,000 00			
December 22nd, 1937	"	144 63	5,144 63	5,144 63	
October 28th, 1937	To complete Stock Judging Pavilion at the Western Ontario Experimental Farm		3,500 00	3,423 36	76 64
	Miscellaneous				
June 23rd, 1937	Canadian Red Cross Society, London Ontario Branch, for work in connection with the relief of flood sufferers in London and vicinity		20,000 00	20,000 00	
	TOTAL SPECIAL WARRANTS		$1,212,250 80	$1,074,135 90	$138,114 90

REPORT FOR 1938

OF

The Workmen's Compensation Board

ONTARIO

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER NO. 28, 1939

ONTARIO

TORONTO
Printed and Published by T. E. BOWMAN, Printer to the King's Most Excellent Majesty
1939

To The Honourable N. O. Hipel,
Minister of Labour,
Parliament Buildings,
Toronto, Ontario.

Dear Mr. Hipel:

I have the honour to submit herewith the Annual Report of The Workmen's Compensation Board for the year 1938.

Yours very truly,

J. Harold,
Chairman.

THE WORKMEN'S COMPENSATION BOARD

JOHN HAROLD, Chairman.
E. HUTCHINSON, Vice-Chairman.
DR. D. J. GALBRAITH, Commissioner.
S. R. JOHNSTON, Secretary.

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REPORT FOR 1938

OF

The Workmen's Compensation Board

ONTARIO

Offices:

4th Floor, Canada Life Building,
330 University Ave., Toronto.

To His Honour the Lieutenant-Governor:

The Workmen's Compensation Board begs to submit its Report for the year 1938.

GENERAL REVIEW

During the year 1938 employment in industry under Schedule 1 of The Workmen's Compensation Act declined considerably and this was reflected in both assessments received and in accidents reported. The provisional pay roll in Schedule 1 for 1937 was estimated at $488,259,450, at an average rate of $1.39 on every $100 of pay roll; for 1938 the provisional pay roll was estimated at $481,275,700, at an average rate of $1.31.

Accidents and Benefits

During 1938 there were reported to the Board 59,834 accidents, as compared with 70,582 in 1937, and 61,382 in 1936.

The total benefits awarded during the year amounted to $6,464,261.19, as compared with $6,129,960.55 during 1937, and $5,643,798.79 during 1936.

The average time loss for accidents causing temporary disability for which compensation was paid was 27.25 days for 1937, as compared with 27.52 days for 1936.

The average weekly wage on which compensation was based was $19.97 for 1937, as compared with $18.82 for 1936.

Of the total benefits awarded during the year, $5,310,366.20 was for compensation and $1,153,894.99 was for medical aid.

The total benefits awarded from the commencement of the Act (January 1, 1915) to January 1, 1939, amounted to $128,801,147.99, and the total accidents reported during the same period were 1,313,157.

Assessments

After two years' trial of an experimental plan of differential rating, which had been adopted on the recommendation of employers' group associations, by which an employer could be called upon, based upon the accident cost of the last completed year, to pay as high as double the preferred rate, the Board cancelled the plan, and refunded to employers all assessments in excess of the preferred rate. The amounts refunded or credited to employers were $749,042.97 for 1936 and $717,394.56 for 1937, a total of $1,466,437.53. Notwithstanding these refunds, the Board, without impairing financial security, was enabled to reduce the average provisional rate from $1.39 in 1937 to $1.31 for 1938, a decrease of 6 per cent.

For 1938 the total amount collected for assessments and estimated to be collected was $6,299,406.55, as compared with a total of $6,778,602.04 for 1937.

Compensation and Other Charges

The compensation for Schedule 1 industries for the year, including estimate for what is still to be awarded for accidents happening during the year, and for adjustment of prior years' accidents, amounted to $5,355,976.13; the medical aid, including estimate for what is outstanding, amounted to $992,747.43; administration expenses for Schedule 1, including $18,849.08 for mine rescue work, $2,066.03 for Occupational Therapy Clinic, and $1,629.28 disbursements under Section 8, amounted to $383,375.72, and $192,250.00 was paid to employers' safety associations. The total expenditures and charges for the year were $5,782,376.57.

The provisional surplus for the year was $554,676.02. The balance forward from prior years was a surplus of $3,209,014.24, which, added to the surplus for the year, less the carry-over for prior years' claims, which amounted to $1,141,972.71, makes a net provisional surplus of $2,621,717.55 at December 31, 1938.

Number of Employers

The total number of employers listed in Schedule 1 at the end of 1938 was 24,144, as compared with 23,871 at the end of 1937. The number in each class and group of industry is shown in Table 2.

Wage Expenditure

The estimated total wage expenditure in Schedule 1 industries for the year 1938, calculated on provisional figures, is $481,275,700, as compared with $488,259,450 in 1937. The amounts for the different classes of industry are shown in Table 3.

The Board has no similar data for Schedule 2 and Crown industries as in these the employers pay for accidents to their own workmen and are not required to make pay roll returns or pay assessments upon them as in Schedule 1. The pay roll would probably be about one-third that of Schedule 1.

Average Rates of Assessment

Assessments in Schedule 1 are in the form of a percentage of pay roll, and the average rate or percentage over all the classes actually paid by the employers can be ascertained by relating the total assessments to the total wage expenditure. This, on the provisional figures, gives an average rate of assessment for 1938 of $1.31 on every $100 of pay roll. The average over all years since the commencement of the Act was $1.21.

Finances

The Board's financial position now appears solvent and satisfactory. The provisional surplus which stood at $3,634,789.21 at December 31, 1937, now stands at $2,621,717.55, and as has been mentioned above refunds of $1,466,437.53 were made to employers because of cancellation of the Differential Rating Plan. There is a Disaster Reserve of $217,887.73 and a Reserve for Depreciation of Securities of $940,274.08, a total of $1,158,161.81 in reserve. The amount in the Silicosis Account for silicosis in the mining industry shows an excess of $623,738.69 of cash over liabilities, and there is $3,297.31 standing to the credit of the Rehabilitation Clinic. This makes a total of $4,406,915.36 of assets in excess of liabilities, to which might be added accrued interest on investment.

The Reserve for Depreciation of Securities of $940,274.08 appears adequate. At the end of 1938 there was in default in Schedule 1, $109,252.24 principal and $249,142.93 interest, a total of $358,395.17, as compared with a total of $422,850.83 at the end of 1937, and $664,147.76 at the end of 1936. During 1938 the accruing interest in default totalled $60,892.19, as compared with $79,097.15 during 1937.

During 1939 it is the Board's intention to revalue the Pension Liability, the only fluctuating item of the Balance Sheet.

The Board's portfolio of investments shows 67 per cent. held in obligations of the Dominion and Ontario Governments and 33 per cent. in municipal and county or municipally-guaranteed debentures.

Safety Associations

Realizing the importance of accident prevention work, the Board has extended aid towards the Safety Associations. During 1938, $192,250 was paid, an increase of 17.2 per cent. over the $164,000 paid in 1937.

The Safety Associations are organizations of the employers for accident prevention work and are under the direction of capable and resourceful managers. The Board urges all employers to take the utmost advantage of the services provided by these associations.

Occupational Therapy

The Board has instituted an Occupational Therapy Clinic, in which injured workmen are assisted towards recovery and return to work by occupational training. The work of rehabilitating disabled persons has been extended and co-ordinated.

Public Relations

It is the desire of the Board to assist employers or groups to the utmost in an understanding of The Workmen's Compensation Act and its administration. To this end many meetings have been attended by the Members of the Board and its staff and explanation of any phase of compensation administration is cheerfully given. It is hoped that more groups will take advantage of this service.

The issue of the Annual Report last year was doubled, and this year sufficient copies are printed to place them in the hands of all persons interested.

Contents of the Report

The chapters following contain the particulars of the Board's operations during 1938, and the Appendix a resumé of operations since January 1, 1915.

Dated at Toronto this 17th day of March, 1939.

J. HAROLD, *Chairman.*
E. HUTCHINSON, *Vice-Chairman.*
D. J. GALBRAITH, *Commissioner.*

TABLE 1

PROVISIONAL FINANCIAL STATEMENT FOR SCHEDULE 1, BY CLASSES, AS AT DECEMBER 31, 1938

Class	INCOME AND CREDITS (Actual and Estimated)				EXPENDITURE AND CHARGES (Actual and Estimated)									SURPLUS OR DEFICIT FOR YEAR (Provisional)	Estimated to Complete Prior Years' Accidents	Balance Forward Prior Years	SURPLUS OR DEFICIT ALL YEARS (Provisional)	Class
	Collected on Provisional Assessments	Estimated Adjustments of Assessments	Sections 8, 107, 114, etc.	TOTAL FOR YEAR	Compensation Paid, other than Pensions	Transferred for Pensions Awarded	Compensation Awarded, Payment Deferred	Compensation Estimated Outstanding for 1938 Accidents	Medical Aid Paid	Medical Aid Estimated Outstanding for 1938 Accidents	Administration Expenses, Disbursements under Sec. 8, Mine Rescue Work, and Occupational Therapy	Paid to Safety Associations	TOTAL FOR YEAR					
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	
1	551,679 23	190,000 00	5,114 17	746,793 40	148,701 86	75,064 75	745 00	189,894 87	80,035 31	23,566 31	39,618 11	26,400 00	584,026 21	162,767 19	75,949 01	−69,236 09	17,582 09	1
2	339,609 82	−88,500 00	332 68	251,442 50	68,933 69	39,930 75	1,330 00	62,307 82	37,305 55	17,577 62	20,395 19	13,300 00	261,080 62	−9,638 12	20,437 50	171,377 36	141,301 74	2
3	66,674 47	12,000 00	39 50	78,713 97	11,223 53	8,770 00	....	11,987 84	7,370 85	624 52	3,526 04	3,241 26	46,744 04	31,969 93	5,379 21	10,828 08	37,418 80	3
4	146,068 70	20,000 00	315 77	166,384 47	28,442 73	28,042 00	565 00	45,632 79	17,867 48	10,423 81	9,529 45	8,760 06	149,263 32	17,121 15	5,462 24	−25,348 89	−13,689 98	4
5	933,451 83	26,650 00	1,508 56	961,610 39	205,613 07	230,294 25	1,790 00	460,097 78	99,681 43	48,082 88	*72,988 51	11,500 00	1,130,047 92	−168,437 53	211,817 60	982,205 08	601,949 95	5
6	145,889 39	13,800 00	231 53	159,920 92	19,085 76	14,685 00	205 00	27,502 23	12,873 48	5,132 19	10,560 43	9,707 23	99,751 32	60,169 60	128,130 84	98,988 99	31,027 75	6
7	94,557 72	−9,200 00	....	85,357 72	13,154 99	32,092 75	....	16,277 45	9,571 53	5,809 77	5,437 64	4,998 46	87,342 59	−1,984 87	3,750 00	116,664 01	110,929 14	7
8	179,290 16	28,500 00	826 51	208,616 67	24,732 26	3,149 75	....	216,480 53	13,406 11	1,086 07	9,544 43	8,773 57	277,172 72	−68,556 05	152,525 20	143,448 46	−77,632 79	8
9	150,131 03	43,000 00	1,787 00	194,918 03	29,460 48	43,477 00	....	52,715 11	21,818 38	1,470 85	9,232 30	8,486 91	166,661 03	28,257 00	46,525 00	232,043 01	213,775 01	9
10	372,559 57	−39,100 00	618 64	334,078 21	58,316 85	49,730 76	805 00	72,337 25	45,837 80	2,904 99	19,864 35	18,260 53	268,057 53	66,020 68	71,302 03	197,742 04	192,460 69	10
11	326,377 21	−12,250 00	541 57	314,668 78	50,635 09	25,531 50	670 00	120,527 70	44,906 41	5,654 91	15,956 80	14,668 49	278,550 90	36,117 88	61,722 37	156,829 61	131,225 12	11
12	202,448 88	−19,800 00	3,861 83	186,510 71	26,816 50	25,856 00	375 00	37,204 89	21,957 95	4,271 76	10,221 09	9,343 73	136,046 92	50,463 79	9,412 50	177,119 72	218,171 01	12
13	71,153 06	5,400 00	2,018 96	78,572 02	14,571 85	20,858 00	75 00	31,822 60	9,690 40	7,191 46	4,727 59	....	88,936 90	−10,364 88	7,187 50	15,661 55	−1,890 83	13
14	75,409 90	−6,100 00	569 48	69,879 38	9,331 36	17,233 00	....	11,419 47	7,705 20	1,790 76	4,188 70	3,850 39	55,518 88	14,360 50	....	15,630 85	29,991 35	14
15	348,012 17	−7,200 00	5,018 56	345,830 73	56,350 34	42,282 50	840 00	63,429 56	41,680 89	6,851 92	18,747 55	15,802 98	245,985 74	99,844 99	20,616 59	13,435 09	92,663 49	15
16	114,766 72	−22,700 00	320 64	92,387 36	13,559 66	12,313 00	355 00	23,674 95	11,388 36	4,085 23	4,593 23	4,222 38	74,191 81	18,195 55	2,750 00	88,520 05	103,965 60	16
17	111,975 36	−14,500 00	189 38	97,664 74	21,184 77	3,657 32	370 00	26,556 98	14,183 45	2,821 32	5,058 60	4,649 90	78,482 34	19,182 40	16,250 00	30,927 80	33,860 20	17
18	75,749 11	−21,600 00	1,730 11	55,879 22	13,887 03	6,882 00	....	11,462 98	11,363 82	816 93	3,418 54	3,142 45	50,973 75	4,905 47	4,593 75	60,026 33	60,338 05	18
19	105,438 99	−21,800 00	183 49	83,822 48	17,608 85	1,170 00	230 00	17,322 43	13,306 65	4,330 61	4,676 69	4,298 96	62,944 19	20,878 29	4,687 50	35,915 80	52,106 59	19
20	289,539 56	44,750 00	5,374 69	339,664 25	54,095 04	71,624 00	340 00	87,286 23	32,857 33	20,482 30	19,205 10	....	285,890 00	53,774 25	27,097 61	70,264 98	96,941 62	20
21	285,393 85	141,000 00	1,832 75	428,226 60	84,147 62	82,502 00	910 00	122,051 15	45,148 14	30,619 80	26,890 70	....	392,269 41	35,957 19	85,998 70	128,822 67	78,781 16	21
22	261,156 58	−23,000 00	1,008 64	239,165 22	40,283 29	37,220 50	....	49,780 40	28,231 21	13,511 15	13,263 62	5,550 00	187,840 17	51,325 05	18,110 10	102,126 57	135,341 52	22
23	87,996 34	8,200 00	402 77	96,599 11	21,533 59	51,151 00	140 00	31,979 03	12,558 33	13,642 57	7,230 94	2,792 70	141,028 16	−44,429 05	21,827 46	320,451 25	254,194 74	23
24	603,226 90	113,300 00	3,818 81	720,345 71	104,568 96	112,385 00	220 00	242,144 38	59,148 20	60,103 44	44,500 12	10,500 00	633,570 10	86,775 61	140,440 00	134,569 92	80,905 53	24
ALL	5,938,556 55	**360,850 00	‡37,646 04	6,337,052 59	1,136,239 17	1,035,902 83	9,965 00	2,031,896 42	699,894 26	292,853 17	*†383,375 72	192,250 00	5,782,376 57	554,676 02	1,141,972 71	3,209,014 24	2,621,717 55	ALL

**Adjusted on actual pay rolls and retroactive rates.

‡Includes: Sec. 8, $13,583.02; Sec. 84 (4), $203.29; Sec. 90 (5), $382.19; Sec. 107, $5,045.28; Sec. 114, $175.00; Reimbursement from D.P. & N.H., $8,993.20; from Accident Cost Refunds, $9,126.89; for Compensation and Medical Aid for Blind Workmen, R.S.O. 1937, cap. 205, $137.17

†Includes disbursements under Section 8, $1,629.28; for Occupational Therapy, $2,066.03.

*Includes Mine Rescue Work, $18,849.08.

Class Numbers of Industries

1. Lumbering.
2. Pulp and paper mills.
3. Furniture manufacturing, etc.
4. Planing mills, etc.
5. Mining and explosives.
6. Brick manufacturing, quarrying, and glass works.
7. Rolling mills, etc.
8. Foundries, etc.
9. Fabrication structural steel, etc.
10. Metal articles, jewellery manufacturing, etc.
11. Agricultural implements, etc.
12. Gas, petroleum, paint, drugs, soap, etc.
13. Milling.
14. Abattoirs, etc.
15. Bakeries, canning, liquors, and tobacco
16. Tanneries, leather and rubber goods.
17. Textiles.
18. Clothing, power laundries, etc.
19. Printing and stationery.
20. Teaming, cartage, coal and wood yards, etc
21. Road construction, etc.
22. Electric power, etc.
23. Steel construction, railway and canal construction, dredging, fishing, etc.
24. Building.

CHAPTER I

SCHEDULE I INDUSTRIES FOR 1938

As some of the industries covered by the Act are under the collective liability system (the employer not being individually liable for accidents to his workmen but being assessed to provide a general fund out of which accidents occurring in his class of industry throughout the Province are taken care of) and others are under the individual liability system (the employer being liable to pay for accidents happening to his own workmen), separate financial statements have to be made for each. The industries under the collective liability system are included in Schedule 1, and those under individual liability in Schedule 2, the former comprising much the greater number.

This chapter deals with Schedule 1 industries for 1938. Schedule 2 industries are dealt with in Chapter II, while Chapter III deals with the work handled in both schedules and the administration of the Act generally during the year, Chapter IV with the different funds in both schedules and their standing at the end of 1938, and Chapter V gives financial and statistical information for 1937 which was not available when the report for that year was made.

Provisional Financial Statement

The provisional financial statement for the industries in Schedule 1 for 1938 is contained in Table 1. To show the standing for the year, estimates have to be made of adjustments of assessments according to actual pay rolls and on the retroactive rates (the assessments for the year being first levied on an estimate of pay roll and at a provisional rate), and estimates also have to be made of compensation and medical aid still to be awarded for accidents happening during the year which have not yet been finally disposed of by reason of the injured workman being still under medical treatment or reports not being received. These estimates contain also all liabilities for claims of previous years yet outstanding and provision for claims of prior years which may subsequently be adjusted. Final figures for the year 1938 will be shown in the next subsequent report in the same manner as the final figures for 1937 are shown in Table 15 of this report.

The difference is to be noted between the amount of compensation and medical aid awarded for the year's accidents and the amount awarded during the year. The latter is partly for the prior year's accidents, while upon the other hand it does not cover all the liability for the current year's accidents. The more correct system of charging each year as far as possible with its own accidents, and for that purpose keeping the year's accounts open till the end of the subsequent year, has been adopted, rather than the looser method of taking the amount awarded during the year as the cost of the year's accidents and leaving always an outstanding liability unprovided for. For the purpose of information and comparison, however, the amounts awarded during the year are shown in Chapter III.

Accounts for Each Class

The industries in Schedule 1 are divided into classes, and as each class (subject to any transfer that may be made to it from the Disaster Reserve in any case of undue burden) bears its own accident cost—the employers in the class being in effect a mutual insurance association—separate accounts have to be kept for the different classes. Each class is credited with its own assessments, its share of interest and other income, and with any transfer made to it from Disaster Reserve, or credit from any other source, and is charged with the cost of its own accidents, its share of administration expenses, the cost of its safety association if it has one, and with its share of any amount set aside for Disaster Reserve.

The figures for each class, and the provisional surplus or deficit for the year, and the balance forward from prior years, and the provisional surplus or deficit for all years, are shown in Table 1. The final figures for each class and also the figures for the different groups within the classes (as in Table 15) will be shown in the next report. The assessments are fixed according to the accident cost and other expenses and charges in each class and group and having regard to the other income and credits.

The classes are numbered and the nature of the industries in each is shown at the bottom of Table 1 and full enumeration of the industries will be found in Schedule 1 of the Act and in the Board's rate book, the latter also showing the grouping within the Class.

Assessments and Other Credits

The total assessments in all classes in Schedule 1 for the year 1938, including estimated adjustments, amounted to $6,299,406.55. In assessments are included collections for default in making returns or payments and interest for under and over estimate of pay roll. The other income and credits for the year consisted of reimbursement for veteran cases, received from the Department of Pensions and National Health; reimbursement for accidents to blind workmen under 21 Geo. V, Cap. 38 (Ontario); cost of accidents collected under Section 107 for failure to furnish pay roll prior to accident; recovery from third parties under Section 8; receipts by virtue of Section 84 (4); receipts by virtue of special orders under Section 90 (5); collections under Section 114 from employers for failure to furnish particulars of accidents, and refunds of accident costs. Other incomes and credits amounted to $37,646.04. The total income and credits for the year are, therefore, $6,337,052.59.

TABLE 2

NUMBER OF FIRMS IN SCHEDULE 1, BY CLASSES AND GROUPS, DECEMBER 31, 1938

Class	Group 0	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	TOTALS
1	464	440	......	84	......	......	......	......	......	......	988
2	33	37	20	......	......	......	......	......	......	......	90
3	281	......	......	......	......	......	......	......	......	......	281
4	332	48	74	26	121	......	......	......	......	......	601
5	......	540	6	......	......	9	13	4	......	......	572
6	73	127	8	121	51	101	107	......	......	......	588
7	15	......	......	......	......	......	......	......	......	......	15
8	104	......	44	41	......	......	......	......	......	......	189
9	17	13	1	......	171	14	......	......	......	......	216
10	348	293	37	90	61	29	144	111	......	......	1,113
11	54	712	......	1	......	......	......	......	......	......	767
12	41	252	119	21	258	......	......	......	......	......	691
13	515	85	......	......	......	......	......	......	......	......	600
14	112	......	......	......	......	......	......	......	......	......	112
15	401	289	68	133	66	216	27	......	......	......	1,200
16	52	108	79	18	36	......	......	......	......	......	293
17	131	132	47	......	......	......	......	......	......	......	310
18	693	190	......	......	......	......	......	......	......	......	883
19	292	642	53	73	......	......	......	......	......	......	1,060
20	2,017	1,114	......	......	......	......	......	......	......	......	3,131
21	179	59	......	......	......	......	......	......	......	......	238
22	169	224	253	840	......	......	......	......	......	......	1,486
23	87	40	353	......	......	......	......	......	......	......	480
24	3,928	439	......	517	1,235	1,208	402	180	......	331	8,240
All											24,144

TABLE 3

ESTIMATE OF WAGE EXPENDITURE, SCHEDULE 1, BY CLASSES, FOR 1938

Class	Wage Expenditure
1	$10,680,000
2	16,875,900
3	7,248,000
4	8,060,500
5	54,767,400
6	7,363,000
7	13,767,400
8	9,901,500
9	14,580,700
10	50,969,900
11	41,806,700
12	29,292,100
13	5,087,700
14	7,806,600
15	41,132,600
16	19,717,400
17	25,876,500
18	21,766,900
19	28,633,800
20	12,650,000
21	7,634,800
22	22,077,500
23	2,443,800
24	21,135,000
TOTAL	$481,275,700

CHAPTER II

SCHEDULE 2 INDUSTRIES DURING 1938

Table 4 is a statement of the compensation awarded and the moneys handled during 1938 in Schedule 2 industries (in which the employer is individually liable for accidents to his workmen). Dominion Crown cases under the Act by Dominion legislation and Provincial Crown Cases referred to the Board for adjustment are included.

The total amount of compensation awarded in Schedule 2 industries and Crown Cases during 1938 was $947,748.20. Of this amount $216,119.20 was for workmen of municipal corporations; $200,513.43 for steam railroads; $8,036.26 for electric railways; $71,927.79 for navigation companies; $2,117.13 for express and sleeping-car companies; $11,992.47 for telephone and telegraph companies; and $574.72 for all other industries in Schedule 2; $254,565.95 for Dominion Crown Cases and $181.901.25 for Provincial Crown Cases. Of the total amount awarded $568,244.47 was for pensions in pension cases and $379,503.73 was for cases not pension cases and for compensation not pensions in pension cases.

In pension cases, except in the case of municipal or government bodies or departments thereof, not so desiring, deposits must be made by employers in Schedule 2 industries. Particulars of these are given under "Deposits under Section 28". Under "Claimants' Moneys" are included moneys held by the Board under awards in which in the interest of the claimant, or for some other reason, payment of the amounts held is deferred to a later date, as in the case of minors. "Deposits under Section 32" are amounts deposited with the Board to enable the Board to make prompt payments without waiting for receipt of cheque from employer.

Employers in Schedule 2 are assessed their share of the expense of administration as set out in Table 8. For 1938 that share amounted to $32,565.12, as compared with $23,159.11 in 1937 and $26,616.04 in 1936. Proportionate to the amount of compensation awarded, administration expenses in Schedule 2 and Crown Cases were 6.71 per cent. in 1938, as compared with 4.94 per cent. in 1937 and 5.80 per cent. in 1936.

Further information as to Schedule 2 funds and particulars of Schedule 2 investments are given in Chapter IV, and in Tables 9 and 14, and in the Appendix.

TABLE 4

STATEMENT FOR SCHEDULE 2 DURING 1938

SCHEDULE 2 AWARDS

	Awards Not Pensions	Pensions	TOTALS
Municipal Corporations, etc.	$83,228 20	$132,891 00	$216,119 20
Steam Railroads	60,050 18	140,463 25	200,513 43
Electric Railways	2,217 26	5,819 00	8,036 26
Navigation Companies	27,925 79	44,002 00	71,927 79
Express and Sleeping Car Companies	2,117 13	....	2,117 13
Telephone and Telegraph Companies	2,902 47	9,090 00	11,992 47
All Others	37 72	537 00	574 72
Dominion Crown Cases	127,365 23	127,200 72	254,565 95
Provincial Crown Cases	73,659 75	108,241 50	181,901 25
TOTALS	$379,503 73	$568,244 47	$947,748 20

SCHEDULE 2 FUNDS

Deposits under Section 28

Cash in bank and invested, Jan. 1, 1938	$3,469,752 24	
Deposits received from employers	201,239 94	
Interest received	166,672 21	
Paid to pensioners		$ 339,321 97
Deposits returned to employers		3,828 41
Cash in bank and invested, Dec. 31, 1938		3,494,514 01
	$3,837,664 39	$3,837,664 39

Claimants' Moneys

Cash in bank and invested, Jan. 1, 1938	$15,708 47	
Deposits received from employers	730 00	
Interest received	710 80	
Paid to claimants		$ 2,775 83
Cash in bank and invested, Dec. 31, 1938		14,373 44
	$17,149 27	$17,149 27

Deposits under Section 32

Cash in bank, Jan. 1, 1938	$ 46,397 22	
Deposits received from employers	760,626 73	
Payments made—Compensation and Medical Aid		$745,380 14
Deposits returned to employers		10,700 59
Cash in bank, Dec. 31, 1938		50,943 22
	$807,023 95	$807,023 95

Reserve for Depreciation of Securities

Cash in bank and invested, Jan. 1, 1938	$183,825 71	
Profit on sale of investments during 1938	357 58	
Cash in bank and invested, Dec. 31, 1938		184,183 29
	$184,183 29	$184,183 29

TOTALS OF FUNDS

Cash in bank and invested, Jan. 1, 1938	$3,715,683 64	
Deposits received from employers	962,596 67	
Interest received	167,383 01	
Profit on sale of investments during 1938	357 58	
Payments made		$1,087,477 94
Deposits returned to employers		14,529 00
Cash in bank and invested, Dec. 31, 1938		3,744,013 96
	$4,846,020 90	$4,846,020 90

CHAPTER III

WORK HANDLED DURING 1938

This chapter deals with the work handled during 1938, and with the administration of the Act generally during the year. Particulars are given in Tables 5 to 8.

The figures are for what has been dealt with during 1938 without regard to the year in which the accidents dealt with occurred, while, as explained in Chapter I, the figures in Chapter I and Chapter V are for the accidents happening during the year.

Benefits Awarded During the Year

The total amount of compensation awarded during 1938 was $5,310,366.20, of which $4,362,618.00 was in Schedule 1 industries, $511,281.00 in Schedule 2 industries, and $436,467.20 in Crown cases. There was also paid for medical aid in Schedule 1 industries during the year $1,153,894.99, making the total benefits awarded during the year $6,464,261.19. In Schedule 2 and Crown cases (for the most part) medical aid is provided directly by the employer and no figures are available.

The benefits awarded each year, and the total since the commencement of the Act, are as follows:

	Schedule 1			
Year	Compensation	Medical Aid	Schedule 2 and Crown Compensation	Total Benefits
1938	$4,362,618 00	$1,153,894 99	$ 947,748 20	$6,464,261 19
1937	3,837,588 62	1,251,848 47	1,040,523 46	6,129,960 55
1936	3,553,282 23	1,058,642 36	1,031,874 20	5,643,798 79
1935	3,225,898 54	1,037,682 86	1,050,531 47	5,314,112 87
1934	2,745,239 16	841,738 41	912,729 66	4,499,707 23
1933	2,298,787 97	667,581 69	732,699 29	3,699,068 95
1932	3,202,639 27	817,240 38	1,105,740 91	5,125,620 56
1931	3,917,045 43	1,060,763 01	1,043,583 66	6,021,392 10
1930	4,942,756 25	1,336,046 05	1,144,216 52	7,423,018 82
1929	5,346,621 19	1,385,524 62	1,280,011 97	8,012,157 78
1928	4,565,688 56	1,166,507 54	1,335,750 83	7,067,946 93
1927	3,930,417 59	1,062,859 64	1,091,377 64	6,084,654 87
1926	3,664,039 94	988,486 70	1,168,825 26	5,821,351 90
1925	3,635,530 27	875,836 01	1,054,077 11	5,565,443 39
1924	4,052,287 77	835,956 60	1,234,575 97	6,122,820 34
1923	4,036,170 26	788,905 90	1,348,785 58	6,173,861 74
1922	3,417,101 61	692,819 94	1,582,975 06	5,692,896 61
1921	3,858,017 50	662,793 89	1,668,452 10	6,189,263 49
1920	5,113,149 77	703,705 66	1,963,389 82	7,780,245 25
1919	2,808,638 65	386,298 51	997,922 77	4,192,859 93
1918	2,751,137 45	369,346 37	763,511 02	3,883,994 84
1917	2,286,954 99	*83,514 07	623,556 37	2,994,025 43
1916	1,553,653 38	†	451,709 93	2,005,363 31
1915	692,389 09	†	200,932 03	893,321 12
Totals	$83,797,653 49	$19,227,993 67	$25,775,500 83	$128,801,147 99

*Half year only. †No provision for medical aid.

The increase in benefits from the early years is largely by reason of increase in wages, compensation being for the most part a percentage of wages, and additional industries have been covered, and some material changes were made in compensation. The large total for 1920 is by reason of the retroactive increase in widows' and children's pensions, and the small amount awarded during 1915 is by reason of many 1915 accidents not being, nor capable of being, finally disposed of till the following year. The amount of benefits awarded for each year's accidents, as distinguished from the amount awarded during the year, is shown in Chapter V.

Accidents Reported During the Year

During 1938, 59,834 accidents were reported. These included some not serious enough to involve payment of either compensation or medical aid and for which no claim was made, and others for which claims were made but which were not allowed by the Board.

At the close of the year there were 1,183 claims in assembly, as compared with 1,687 at the end of 1937, notice of the accident having been given but reports necessary to deal with the case not yet having been received.

The number of accidents reported each year, and the total number since the commencement of the Act, are as follows:

Year	Total
1938	59,834
1937	70,582
1936	61,382
1935	58,546
1934	54,730
1933	38,042
1932	41,470
1931	52,894
1930	69,267
1929	87,103
1928	79,398
1927	71,979
1926	65,916
1925	60,012
1924	58,675
1923	61,109
1922	50,411
1921	45,191
1920	54,851
1919	44,260
1918	47,848
1917	36,532
1916	26,092
1915	17,033
All years	1,313,157

Accidents Paid For During the Year

Table 5 shows the number of accidents in which compensation or medical aid was paid during the year. The total number was 51,925, as compared with 66,368 during 1937. The 51,925 comprised 281 deaths, 13 permanent total disability cases, 876 permanent partial disability cases, 23,255 temporary disability cases, and 27,500 medical aid only cases. Except for Provincial Crown cases, Schedule 2 and Crown cases involving medical aid only, which are a large proportion of the accidents reported, are not included as accidents paid for, as the medical aid is furnished by the employer.

The number of accidents in which compensation or medical aid was awarded each year since the commencement of the Act is as follows:

Year	Schedule 1	Schedule 2	Crown	Totals
1938	47,816	1,874	2,235	51,925
1937	61,643	1,897	2,828	66,368
1936	51,620	1,828	2,741	56,189
1935	46,960	1,707	5,631	54,298
1934	41,244	1,800	6,258	49,302
1933	29,766	1,487	2,453	33,706

Year	Schedule 1	Schedule 2	Crown	Totals
1932........	38,469	1,914	3,521	43,904
1931........	43,611	2,561	2,710	48,882
1930........	56,715	2,723	2,357	61,795
1929........	68,195	2,883	2,737	73,815
1928........	61,384	2,723	2,425	66,532
1927........	55,894	2,741	2,443	61,078
1926........	52,199	2,489	2,182	56,870
1925........	47,782	2,734	2,217	52,733
1924........	46,616	2,820	2,475	51,911
1923........	47,873	3,849	1,916	53,638
1922........	37,172	4,572	765	42,509
1921........	34,271	5,161	834	40,266
1920........	42,693	4,444	714	47,851
1919........	34,400	4,517	153	39,070
1918........	36,565	4,335	30	40,930
*1917........	25,277	3,406	19	28,702
*1916........	15,370	2,825	3	18,208
*1915........	8,328	1,494	7	9,829

*Cases involving medical aid only not covered till July 1, 1917.

Awards Changed

In addition to claims compensated, as shown in Table 5, the Board in 1938 opened for further award 618 claims which had been settled previously.

Cheques, Assessments, Mail, and Callers

In all, 284,756 cheques were issued during 1938, an average of about 975 daily, and there were 36,655 assessments made, including refunds. About 5,900 pieces of mail were handled daily, and the average number of office callers was 60 a day.

Receipts and Payments

The receipts and payments during the year are shown in Table 6, the statement for Schedule 2 including Crown cases. Explanation of the items and the funds referred to will be found in other parts of the report. A summary of receipts and payments since the commencement of the Act is given in the Appendix.

Payments to Safety Associations

The safety or accident prevention associations are organizations of employers established under the authority of the Act by the employers in 21 out of the 24 classes of industry. They are under the management of the employers but the expenses are paid by the Board out of the Accident Fund.

The total amounts so paid are set out in Table 7, which table also shows the amount paid out on account of mine rescue work in Class 5.

Administration Expenses

The administration expenses of the Board, analyzed under the different headings, are shown in Table 8. The gross administration expenses during 1938 were $449,765.47, which included special statistical services for which refunds have been received of $10,750, making the total administration expenses $439,015.47, as compared with $386,397.37 during 1937. The employers pay the whole expense of the administration of the Act. The amount is divided, according to the number of accidents handled, among Schedule 1(Accident Fund and Silicosis Account), Schedule 2, and Dominion and Provincial Crown.

The amount charged to the Silicosis Account was $12,702.68; to the Rehabilitation Clinic, $1,000; to Mine Rescue Work, $897.58; to Schedule 1 employers, $360,831.33; to Schedule 2, $32,565.12; to Dominion Crown, $20,521.29; and to Provincial Crown, $10,497.47.

The cost of office furniture, fixtures, and equipment, including permanent equipment, has always been charged to administration expenses in the year in which payment therefor was made, and no entry for which has ever been made in the standing of the funds. The value of this furniture and equipment at the present time is estimated at about $30,000.

The total administration expenses for 1938 less expenses of supervising work in connection with silicosis, rehabilitation and mine rescue stations (not properly administrative work) and handling claims for silicosis, were 6.56 per cent. of benefits awarded, being 6.54 per cent. of benefits awarded in Schedule 1 and 6.71 per cent. in Schedule 2 and Crown cases.

A charge of $2,425.77 was made for the institution and conduct of a newly-installed occupational therapy clinic. This cost was pro rated: $117.79 to Dominion Crown, $55.49 to Province of Ontario; $186.46 to Schedule 2 employers; and $2,066.03 to Schedule 1 employers.

TABLE 5

COMPENSATION, MEDICAL AID, AND ACCIDENTS PAID FOR, DURING 1938

Compensation Awarded during 1938

Schedule 1	$4,362,618 00
Schedule 2	511,281 00
Crown Cases	436,467 20
Total	$5,310,366 20

Medical Aid Paid during 1938

Schedule 1	$1,153,894 99
Schedule 2	furnished by employer
Crown Cases	furnished by employer

Accidents Paid For during 1938

	Medical Aid only	Temp. Dis.	Perm. Partial Dis.	Perm. Total Dis.	Death	TOTALS
SCHEDULE 1—						
Full Compensation	......	17,515	785	12	221	18,533
Part Compensation	......	2,198	...	..	2	2,200
Medical Aid only	27,083	......	...	..	...	27,083
Totals	27,083	19,713	785	12	223	47,816
SCHEDULE 2—						
Full Compensation	......	1,569	55	1	33	1,658
Part Compensation	......	211	...	..	2	213
Medical Aid only	3	......	...	..	...	3
Totals	3	1,780	55	1	35	1,874
CROWN CASES—						
Full Compensation	......	1,606	36	..	21	1,663
Part Compensation	......	156	...	..	2	158
Medical Aid only	414	......	...	..	...	414
Totals	414	1,762	36	..	23	2,235
GRAND TOTALS	27,500	23,255	876	13	281	51,925

TABLE 6

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1938

Schedule 1

RECEIPTS		
Cash in Banks, Jan. 1, 1938:		
Canadian Bank of Commerce	$438 45	
Royal Bank of Canada	6,272 95	
Dominion Bank	264,556 36	$271,267 76
Net Assessments, Penalties, etc.:		
Gross Assessments	6,108,421 89	
Under Section 8	13,583 02	
Under Section 84 (4)	203 29	
Under Section 90 (5)	382 19	
Under Section 107	5,045 28	
Under Section 114	175 00	
From D.P. & N.H.	8,993 20	
From Province of Ontario for blind workmen	137 17	
From Accident Cost Refunds	9,126 89	
	$6,146,067 93	
Less:		
Assessments and Penalties Refunded	590,173 56	5,555,894 37
Silicosis		607,163 08
Interest:		
From Investments	1,375,865 39	
Exchange Premium	3,478 82	
From Bank and Short Date Deposits	10,410 86	1,389,755 07
Investments:		
Principal returned	839,208 23	
Short Date Deposit returned	900,000 00	
Profit on Sale of Investments	70,333 95	1,809,542 18
From Schedule 2 and Crown Employers for Administration Expenses, account of prior years, paid out of Schedule 1 in 1937		51,421 25
Special Statistical Services		10,750 00
Rehabilitation Clinic:		
Refunds from Medical Aid	11,387 15	
Refunds from Schedule 2 Employers	131 76	11,518 91
		$9,707,312 62

PAYMENTS		
Compensation Paid, other than Pensions and Compensation Deferred		$1,839,751 06
Pensions		2,185,981 45
Deferred Compensation		30,565 27
Rehabilitation		6,355 70
Medical Aid		1,136,059 74
Silicosis		154,704 85
Under Section 8		1,629 28
Mine Rescue Work		17,951 50
Administration Expenses		449,765 47
Safety Associations		192,250 00
Rehabilitation Clinic Expenses		10,522 34
Occupational Therapy		2,425 77
Investments:		
Permanent Investments	$2,780,612 37	
Short Date Investments	500,000 00	3,280,612 37
Cash in Banks, Dec. 31, 1938:		
Canadian Bank of Commerce	$1,626 83	
Royal Bank of Canada	20,291 50	
Dominion Bank	376,819 49	398,737 82
		$9,707,312 62

Table 6—Continued

Schedule 2

RECEIPTS		
Cash in Imperial Bank of Canada, Jan. 1, 1938		$94,168 75
Employers' Deposits under Section 28		201,239 94
Employers' Deposits under Section 32		760,626 73
Employers' Deposits of Claimants' Moneys		730 00
Interest:		
From Investments	$166,691 23	
Exchange Premium	153 37	
From Bank Deposits	538 41	
		167,383 01
Investments:		
Principal returned	$11,987 38	
Profit on Sale of Investments	357 58	
		12,344 96
		$1,236,493 39

PAYMENTS		
To Claimants out of Deposits under Section 28		$339,321 97
Deposits returned to Employers under Section 28		3,828 41
To Claimants out of Claimants' Moneys		2,775 83
Paid out of Deposits under Section 32:		
Compensation	$693,781 91	
Rehabilitation	601 18	
Medical Aid	50,997 05	
		745,380 14
Deposits returned to Employers under Section 32		10,700 59
Investments		58,331 97
Cash in Imperial Bank of Canada, Dec. 31, 1938		76,154 48
		$1,236,493 39

TABLE 7

PAYMENTS TO SAFETY OR ACCIDENT PREVENTION ASSOCIATIONS, 1938

Association	Class	Total Payments	
Lumbermen's Safety Association	1	$26,400 00	
Ontario Pulp and Paper Makers' Safety Association	2	13,300 00	
Class 5 Accident Prevention Association	5	11,500 00	
Industrial Accident Prevention Associations	3, 4, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 230	125,000 00	
Electrical Employers' Association of Ontario	22	5,550 00	
Construction Safety Association of Ontario	24	10,500 00	
			$192,250 00

MINE RESCUE WORK ACCOUNT (CLASS 5), 1938

Maintenance of Stations, Salaries and Supplies	$17,951 50	
Administrative Supervision	897 58	
		$18,849 08

REHABILITATION CLINIC ACCOUNT, 1938

Credit from 1937	$ 3,300 74	
Receipts during year	11,518 91	
	$14,819 65	
Maintenance, Salaries and Supplies	$10,522 34	
Administrative Supervision	1,000 00	
	$11,522 34	
Balance December 31, 1938		$3,297 31

OCCUPATIONAL THERAPY ACCOUNT, 1938

Maintenance, Salaries and Supplies	$2,425 77

TABLE 8

ANALYSIS OF ADMINISTRATION EXPENSES DURING 1938

Salaries of Board and Staff	$321,675 00	
Travelling Expenses of Board and Staff	31,121 47	
Printing, Stationery, and Office Supplies	22,343 34	
Postage	26,868 00	
Telephone, Telegraph, and Express	1,926 95	
Legal Expenses, Witness Fees, etc.	2,487 56	
Claimants' Travelling Expenses and Medical Examinations	813 37	
Insurance and Security Service	5,175 56	
Auditor's Services, under instructions of Attorney-General	2,500 00	
Office Rent	17,321 38	
Permanent Equipment	9,269 00	
Miscellaneous Services, Equipment Rental, and Repairs	6,055 44	
Meals for Staff when working overtime (nights, Saturday afternoons, etc.)	2,208 40	
Gross Administration Expenses, 1938	$449,765 47	
Received for Special Statistical Services	10,750 00	
TOTAL ADMINISTRATION EXPENSES		$439,015 47
Charged to Rehabilitation Clinic	$ 1,000 00	
Charged to Silicosis Account	12,702 68	
Charged to Mine Rescue Work	897 58	
Charged to Dominion of Canada	20,521 29	
Charged to Province of Ontario	10,497 47	
Charged to Schedule 2 Employers	32,565 12	
Charged to Schedule 1 Employers	360,831 33	
		$439,015 47

OCCUPATIONAL THERAPY

Gross Expenses, 1938		$2,425 77
Charged to Dominion of Canada	$ 117 79	
Charged to Province of Ontario	55 49	
Charged to Schedule 2 Employers	186 46	
Charged to Schedule 1 Employers	2,066 03	
		$2,425 77

CHAPTER IV

CONDITION OF FUNDS

A general statement of the condition of the funds in Schedule 1 and in Schedule 2 is contained in Table 9, and particulars of the various funds and of the Board's investments are given in Tables 10 to 14. A summary since the commencement of the Act will be found in the Appendix.

Schedule 1 Funds

The Schedule 1 funds are known and referred to in the Act as the "Accident Fund". They comprise, in addition to current funds out of which temporary payments of compensation, medical aid, and administration expenses are paid, the Pension Fund, Disaster Reserve, and Compensation Deferred. The standing of the Accident Fund, showing assets and liabilities at December 31, 1938, is shown in Table 9. The balance of assets in excess of liabilities at that date was $3,779,879.36, being $217,887.73 Disaster Reserve, $2,621,717.55 standing at the credit of the classes December 31, 1938, and $940,274.08 reserve for depreciation of securities. This is exclusive of office equipment and furniture mentioned in Chapter III.

Pension Fund

The Pension Fund, representing the outstanding pension liability, comprises the largest part of the funds standing to the credit of Schedule 1. The purpose of the Pension Fund is to take care of future payments of pensions which have already been awarded. Actuarial tables, embodying the contingencies of death and remarriage, have been compiled to show for each age and kind of pension the average amount (sometimes referred to as capitalized value) necessary to complete pension payments. When a pension is awarded this average amount is transferred from current funds to the Pension Fund. All payments of pensions are made from the Pension Fund. Since the amount transferred in any one instance is the average amount required, no re-transfer is made should a residue be left at the expiry of the pension, nor is any additional transfer made should the amount be exhausted before expiry of the pension.

Particulars of Pension Fund

Table 10 gives particulars of the Pension Fund for each class. The balance in the fund at the commencement of 1938 was $22,275,818.13; $2,423,809.52 was transferred during the year for pension awards; $1,133,733.08 interest was added, and $2,185,981.45 was paid for pensions. The balance in the fund at the end of the year was $23,647,379.28.

The transfers for pension awards during the year included $99,348.73 transferred from Silicosis Account to provide for pensions in cases of silicosis in Class 5.

Disaster Reserve

The Disaster Reserve is a fund set aside under the provisions of Section 101 (2) of the Act to meet any unforeseen disaster or other circumstance which might unduly burden the employers in any class of industry. The fund has been accumulated by a transfer of one per cent. of the gross assessments up to the end of 1922, and for the year 1928. These are the only moneys set aside or held by the Board which do not directly cover liabilities actually incurred by reason of accidents which have already happened.

The standing of the Disaster Reserve is shown in Table 11. The balance at the end of 1938 was $217,887.73, $11,382.64 interest being added to the $229,649.75 in the fund at the beginning of the year, and $23,144.66 being withdrawn, of which $6,875.00 was transferred to Class 6, $14,492.95 to Class 10, and $1,776.71 to Class 20 to meet excess payments in second injury cases.

Reserve for Depreciation of Securities

During 1936 a reserve for depreciation of securities was established. This reserve is made up of profits on the sale of investments and excess interest not allocated to Pension Fund, Disaster Reserve, and Compensation Deferred. Withdrawals are made on refunding debentures to "write up" values to market conditions. At the beginning of 1938 there was $644,151.20 in this reserve. During the year was added $70,333.95 profits on sale of investments, and $243,763.12 interest; and $17,974.19 was transferred to investment account, leaving a balance of $940,274.08 in the reserve at December 31, 1938.

Compensation Deferred

The funds included under "Compensation Deferred" comprise compensation moneys held at interest for claimants in Schedule 1, payment being deferred to a future time by reason of the claimant being a minor or for other reasons. The condition of the fund is shown in Table 12.

At the beginning of the year the amount on hand was $44,088.85; deferred awards during the year amounted to $30,015.53, and $876.23 interest was added during the year; the payments during the year amounted to $30,565.27, of which $30,214.80 was for principal and $350.47 for interest, leaving a balance of $44,415.34.

A considerable portion of the funds included under "Compensation Deferred" do not bear interest, payment of principal being deferred to the future.

Silicosis Account

Table 13 gives particulars of the Silicosis Account which was established to take care of special assessments and payments in Class 5 necessitated by the addition of "Silicosis" contracted in mining operations to the list of industrial diseases under the Act, by amendment effective April 8, 1926.

The balance in the account at the beginning of 1938 was $1,879,877.04; $607,163.08 was collected by assessment; $162,034.92 was paid for compensation, $17,835.25 for medical aid, $70,369.06 for salaries and expenses in connection with examination of underground mine-workers, $12,702.68 was transferred to the accident fund for expenses of supervision and handling claims; and $3,814.35 was paid for salaries and expenses of the Referee Board. The surplus in the account December 31, 1938, was $2,220,283.86

The following shows the position of the Silicosis Account in respect of assets and liabilities at December 31, 1938

Total Collections, including Interest added		$4,488,463 64
Total Payments, Compensation and Medical Aid	$1,638,324 77	
Total Expenses	629,855 01	
Held to meet Incurred Losses	1,596,545 17	
Held to meet Losses and Expenses in 1939	422,059 58	
Surplus, December 31, 1938	201,679 11	
		$4,488,463 64

Investments

Particulars of the Board's investments are given in Table 14.

The total invested at the end of the year in Schedule 1 was $32,337,435.00, consisting of $30,814,005.05, value of investments at the beginning of the year, $3,280,612.37, invested during the year, less $1,739,208.23 principal returned, and $17,974.19, amount written off for depreciation of securities.

Particulars of each investment are shown in the list, including kind of investment, particular security, face rate of interest, term, par value, and book value.

With the exception of short-date deposits of current funds intended for use before the current year's assessments are received, all investments consist of Province of Ontario debentures, municipal or municipally-guaranteed debentures, and Dominion of Canada guaranteed bonds.

The average rate of interest received on permanent investments in Schedule 1 during 1938 was approximately 4.41 per cent., as compared with 4.60 per cent. in 1937, and 4.14 per cent. received during 1936. A nominal one per cent. is received on current bank balances.

Schedule 2 Funds

The funds handled by the Board in respect of Schedule 2 industries include employers' deposits for pensions required to be made with the Board under the provisions of Section 28 of the Act, temporary deposits or advances of money made by employers under Section 32 to facilitate prompt payment of claims, and claimants' moneys held by the Board in cases of awards, payment of which, by reason of the claimant being a minor, or for other reason, is deferred to a future time.

The standing of Schedule 2 funds at December 31, 1938, is shown in the latter part of Table 9, and the particulars and a list of Schedule 2 investments are given in Table 14.

At the end of 1938 the deposits held under Section 28 amounted to $3,494,514.01; deposits under Section 32 to $50,943.22; and the amount of claimants' moneys held by the Board was $14,373.44; and $184,183.29 reserve for depreciation of securities, making a total of $3,744,013.96, of which $3,667,859.48 was held in permanent investments and $76,154.48 cash in bank.

The rate of interest distributed to Schedule 2 Funds, not including reserve for depreciation of securities, during 1938 was 4.92 per cent., as compared with 4.74 per cent. distributed during 1937, and 5.356 per cent. during 1936.

TABLE 9

STANDING SCHEDULE 1 ACCIDENT FUND AS AT DECEMBER 31, 1938

ASSETS		
Cash in Banks:		
Canadian Bank of Commerce	$1,626 83	
Royal Bank of Canada	20,291 50	
Dominion Bank	376,819 49	
		$398,737 82
Short Date Deposits		200,000 00
Investments		32,137,435 00
Due from Schedule 2 Employers:		
For Administration Expenses	$32,576 13	
For Occupational Therapy	186 46	
		32,762 59
Due from Dominion of Canada:		
For Administration Expenses	$20,521 29	
For Occupational Therapy	117 79	
		20,639 08
Due from Province of Ontario:		
For Administration Expenses	$10,497 47	
For Occupational Therapy	55 49	
		10,552 96
Due from Rehabilitation Clinic for Administration Expenses		1,000 00
Assessments Estimated to be Due on Adjustment of 1938 Pay Rolls (see Table 1)		360,850 00
		$33,161,977 45

LIABILITIES		
Compensation Deferred, other than Pensions		$44,415 34
Pension Liability		23,647,379 28
Silicosis Account:		
For Incurred Losses	$1,596,545 17	
For 1939 Losses and Expenses	422,059 58	
Surplus Dec. 31, 1938	201,679 11	
		2,220,283 86
Balance at Credit of Rehabilitation Clinic		3,297 31
Compensation Estimated Outstanding for 1938 Accidents		2,031,896 42
Medical Aid Estimated Outstanding for 1938 Accidents		292,853 17
Estimated to Complete Prior Years' Accidents		1,141,972 71
Assets in Excess of Liabilities:		
Disaster Reserve	$217,887 73	
Reserve for Depreciation of Securities	940,274 08	
Balance at Credit of Classes (see Table 1)	2,621,717 55	
		3,779,879 36
		$33,161,977 45

STANDING SCHEDULE 2 FUNDS AS AT DECEMBER 31, 1938

ASSETS	
Cash in Imperial Bank of Canada	$76,154 48
Investments	3,667,859 48
	$3,744,013 96

LIABILITIES	
Balance Employers' Deposits under Section 28	$3,494,514 01
Balance Employers' Deposits under Section 32	50,943 22
Claimants' Moneys held by the Board	14,373 44
Reserve for Depreciation of Securities	184,183 29
	$3,744,013 96

TABLE 10

PENSION FUND, SCHEDULE 1 BY CLASSES, DECEMBER 31, 1938

Class	Balance Forward from 1937	Pension Awards during 1938	Interest Received	Pension Payments	Balance as at Dec. 31, 1938	Class
	$ c.	$ c.	$ c.	$ c.	$ c.	
1	2,035,123 09	160,206 56	102,386 66	186,907 20	2,110,809 11	1
2	1,073,410 97	100,244 69	54,434 73	96,558 59	1,131,531 80	2
3	270,791 57	22,633 50	13,575 72	27,891 70	279,109 09	3
4	657,144 63	73,518 03	33,384 10	68,929 05	695,117 71	4
5	3,665,464 38	*617,625 34	191,450 79	385,066 06	4,089,474 45	5
6	908,524 29	80,183 75	45,679 76	92,599 58	941,788 22	6
7	553,833 01	61,297 11	28,109 05	58,481 77	584,757 40	7
8	454,159 98	32,377 75	22,685 89	44,464 97	464,758 65	8
9	918,034 79	62,436 52	45,786 90	89,640 61	936,617 60	9
10	1,128,209 61	133,766 76	57,895 73	102,947 13	1,216,924 97	10
11	950,614 04	39,609 58	46,913 20	87,476 30	949,660 52	11
12	722,857 71	40,520 15	35,718 89	73,083 70	726,013 05	12
13	491,980 48	45,376 00	24,995 89	41,844 68	520,507 69	13
14	233,795 62	26,475 00	11,869 57	25,144 69	246,995 50	14
15	914,946 67	89,110 04	46,183 58	95,033 10	955,207 19	15
16	560,340 82	12,862 42	27,509 58	46,745 49	553,967 33	16
17	466,264 59	14,083 82	22,910 01	41,525 81	461,732 61	17
18	195,581 62	16,102 15	9,820 55	19,292 40	202,211 92	18
19	318,393 95	9,632 10	15,650 54	28,122 91	315,553 68	19
20	789,848 84	133,208 44	41,467 32	75,540 89	888,983 71	20
21	1,035,366 51	150,455 00	53,684 03	100,337 24	1,139,168 30	21
22	439,672 34	65,984 00	22,692 92	48,817 97	479,531 29	22
23	1,217,485 89	88,032 75	61,084 12	108,954 68	1,257,648 08	23
24	2,273,972 73	348,068 06	117,843 55	240,574 93	2,499,309 41	24
	22,275,818 13	2,423,809 52	1,133,733 08	2,185,981 45	23,647,379 28	

Transferred within the Fund: Class 1 to 15	$ 1,359 75
Class 15 to 24	1,926 00
Class 20 to 23	850 00
Class 24 to 12	2,035 20
*Transferred from Silicosis Account, Class 5	$99,348 73

TABLE 11

DISASTER RESERVE, DECEMBER 31, 1938

Balance in Fund as at December 31, 1937		$229,649 75
Interest credited in 1938		11,382 64
		$241,032 39
Withdrawn account Class 6	$ 6,875 00	
Withdrawn account Class 10	14,492 95	
Withdrawn account Class 20	1,776 71	
		23,144 66
Balance as at December 31, 1938		$217,887 73

RESERVE FOR DEPRECIATION OF SECURITIES

Balance in Fund December 31, 1937	$644,151 20
Profit on sale of investments during 1938	70,333 95
Interest	243,763 12
	$958,248 27
Transferred to Investment Account	17,974 19
Balance as at December 31, 1938	$940,274 08

TABLE 12

COMPENSATION DEFERRED, DECEMBER 31, 1938

Balance in Fund, December 31, 1937		$44,088 85
Compensation awarded, payment deferred, during 1938		30,015 53
Interest credited in 1938		876 23
		$74,980 61
Paid claimants during 1938:		
Principal	$30,214 80	
Interest	350 47	
		30,565 27
Balance as at December 31, 1938		$44,415 34

TABLE 13

SILICOSIS ACCOUNT, DECEMBER 31, 1938

Balance in Fund, December 31, 1937		$1,879,877 04
Assessments collected under Class 5		607,163 08
		$2,487,040 12
Payments made:		
Compensation	$162,034 92	
Medical Aid	17,835 25	
Salaries and Expenses	70,369 06	
To Accident Fund for supervision and handling claims	12,702 68	
Salaries and Expenses of Referee Board	3,814 35	
		266,756 26
Balance as at December 31, 1938		$2,220,283 86

TABLE 14

INVESTMENTS, DECEMBER 31, 1938

Schedule 1

Book Value of Investments, January 1, 1938		$30,814,005 05
Invested during the year		3,280,612 37
		$34,094,617 42
Less Principal returned	$1,739,208 23	
Less amount written off for depreciation	17,974 19	
		1,757,182 42
BOOK VALUE OF INVESTMENTS, DECEMBER 31, 1938		$32,337,435 00

Schedule 2

Book Value of Investments, January 1, 1938	$3,621,514 89
Invested during the year	58,331 97
	$3,679,846 86
Less Principal returned	11,987 38
BOOK VALUE OF INVESTMENTS, DECEMBER 31, 1938	$3,667,859 48

TABLE 14—Continued

LIST OF INVESTMENTS

SCHEDULE 1 FUNDS

Municipal Debentures

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Belleville:	6%	Jan. 2, 1942	14,000 00	14,248 14
	6%	April 5, 1942	13,000 00	13,265 60
	5½%	May 1, 1952	120,000 00	122,299 26
	4½%	1943-1954	156,000 00	149,603 23
	5%	1947-1949	20,000 00	19,559 55
	5%	1946-1960	147,388 05	138,157 63
	5%	1946-1950	17,856 38	16,857 53
	5%	1945-1959	24,545 76	23,017 64
Bowmanville	5%	1945-1949	41,035 25	40,254 80
Brampton	4½%	1939-1944	1,149 10	1,114 73
Brantford:	4½%	Dec. 31, 1942	10,000 00	9,389 92
	6%	1939-1947	44,400 00	44,445 15
	5%	1940-1949	53,000 00	51,514 70
	5½%	1941-1953	13,000 00	13,498 43
	4%	Dec. 31, 1950	5,000 00	4,552 87
Bridgeburg	5½%	1950-1956	13,403 01	14,214 36
Burlington	5%	1942-1951	10,843 18	10,994 49
Capreol	6%	1951-1958	18,000 00	18,382 53
Carleton Place	5½%	1939-1941	5,837 37	5,837 37
Collingwood (Guaranteed by County of Simcoe)	5%	1947-1951	191,000 00	183,423 80
Dundas	5½%	1939-1946	10,896 27	10,938 36
East York:	5%	1940-1965	172,187 29	163,064 13
	5%	1940-1965	72,105 65	68,301 81
Essex, Village of	5%	1933-1934	1,266 00	1,256 46
Etobicoke, Twp.:	5½%	1946-1949	45,000 00	46,627 40
	5%	1940-1957	25,277 74	25,359 65
	5%	1941-1957	71,000 00	69,882 25
	5%	1940-1958	28,416 47	28,515 42
	5%	1939-1948	75,071 95	70,864 23
	4½%	1939-1962	8,000 00	8,000 00
	4½%	1940-1963	29,902 43	29,902 43
Fort Erie:	5½%	1945-1961	50,715 22	53,540 64
	5½%	1944-1961	23,621 00	24,736 19
Fort William:	5%	Feb. 1, 1944	25,000 00	24,130 18
	6%	May 1, 1950	10,000 00	9,676 47
	5%	April 1, 1955	55,000 00	54,245 57
	5%	1946-1951	69,924 85	70,405 39
	5%	July 1, 1952	34,672 60	34,978 38
	5%	July 1, 1947	42,751 00	43,016 26
	5%	Jan. 1, 1957	30,000 00	31,085 02
	5%	April 1, 1959	76,000 00	75,323 61
Fort William (Guaranteeing McKellar Hospital)	4½%	May 1, 1948	88,000 00	87,161 90
Forest Hill Village:	5%	1943-1957	44,730 93	44,581 15
	5%	May 1, 1939	141 36	140 47
	5%	1945-1959	101,281 75	95,467 87
Galt:	5, 5½ & 6%	Dec. 6, 1961	19,284 69	18,532 42
	5½%	Dec. 1, 1962	68,400 36	71,195 60
	6%	Dec. 1, 1962	14,135 90	15,676 33
	5½%	Dec. 15, 1964	14,097 18	15,224 23
	5½%	July 2, 1965	35,254 75	37,558 40
Glencoe:	5½%	1939 & 1940	2,781 00	2,732 41
	5½%	May 1, 1959	70,000 00	71,475 82
Guelph:	5½%	1940-1944	13,287 11	13,068 98
	4%	Dec. 31, 1953	46,441 00	40,897 10

Table 14—Continued

Municipal Debentures—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Hamilton:	5%	1944-1945	21,000 00	20,212 16
	4½%	1944-1945	37,000 00	34,837 39
	4½%	Mar. 1, 1947	10,000 00	9,657 20
	5%	1947-1949	54,000 00	53,742 55
	5%	1947-1949	104,000 00	103,504 78
	5%	1947-1949	6,000 00	5,971 83
	5%	1947-1949	2,000 00	1,990 61
	4½%	1946-1948	19,000 00	18,256 67
	4½%	1946-1949	42,000 00	40,345 08
	4½%	1946-1948	47,000 00	45,175 69
	4½%	1946-1948	55,000 00	52,766 04
	4½%	1946-1948	32,000 00	30,698 81
	4½%	1946-1948	9,000 00	8,635 09
	4½%	1946-1948	16,000 00	15,349 60
	4½%	1946-1949	82,000 00	78,663 44
	4½%	1946-1949	51,000 00	48,923 28
	5%	Jan. 2, 1945	43,000 00	42,887 03
	5%	Feb. 1, 1945	26,000 00	25,931 56
	5%	April 1, 1945	16,000 00	15,957 94
	5%	June 1, 1945	55,000 00	54,855 50
	5%	May 1, 1945	32,000 00	31,915 91
	6%	1943-1952	170,000 00	169,848 88
	6%	April 1, 1950	26,000 00	26,984 32
	6%	April 1, 1952	17,000 00	17,689 78
	4½%	Feb. 1, 1945	50,000 00	48,493 43
	5%	1959-1963	50,000 00	50,337 48
	5%	April 1, 1945	3,000 00	2,967 30
	4½%	Feb. 1, 1944	4,000 00	3,867 60
	5%	1950 & 1951	28,000 00	27,532 63
	5%	1952 & 1953	100,000 00	98,186 37
	5%	April 1, 1951	22,000 00	21,628 76

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Hanover	5½%	1945-1959	65,703 97	66,848 61
Hawkesbury	6%	1933-1940	51,432 34	48,982 22
Kenora	5%	1939-1956	46,500 00	45,327 06
Kingston:	6%	1940-1948	2,500 00	2,489 90
	6%	1943-1945	16,300 00	16,213 63
Kingsville	6½%	1934-1941	33,155 59	33,024 27
Kitchener:	5½%	1943-1951	47,682 18	48,486 07
	5½%	1943-1952	28,490 33	28,984 41
	5½%	1939-1946	569 35	563 80
Leaside:	5½%	1939-1949	77,000 00	74,962 37
	4½%	1939-1957	29,574 13	29,574 13
La Salle	.....	....	2,279 90	2,279 90
Listowel	5½%	1939-1947	9,566 46	9,410 25
London:	5%	1943-1945	12,000 00	12,025 37
	5%	1946-1950	58,000 00	58,761 76
Midland (Guaranteed by County of Simcoe):	5½%	1940-1947	14,339 86	14,957 36
	5½%	1940-1944	10,720 05	11,126 80
	5%	1940-1947	36,422 68	36,516 27
	5%	1940-1957	47,160 21	47,305 06
Mimico:	5½%	1935-1960	62,940 45	62,940 45
	5%	1935-1950	36,525 33	36,525 33
	5½%	1934-1961	44,694 24	44,694 24
Mount Forest	5%	1945-1948	26,183 59	25,829 94
Napanee	5%	1941-1943	14,623 28	14,716 86

Table 14—Continued

Municipal Debentures—Continued

Security	Face Rate	Term	Par Value		Book Value	
			$	c.	$	c.
Niagara Falls:	5%	1939-1945	43,548	31	41,542	84
	6%	1939-1941	25,634	98	25,399	49
	5½%	1940-1953	54,098	50	54,790	00
	5%	1939-1952	15,112	31	14,822	30
	4½%	1940-1952	23,000	00	23,000	00
North Bay:	5%	1939-1942	1,361	54	1,351	18
	6%	1939-1942	53,749	99	54,116	68
	5%	1939-1947	34,161	88	34,545	39
	4½%	1939-1943	13,080	56	12,989	96
	5½%	1939-1948	152,370	42	155,380	52
Northumberland and Durham, United Counties of	5%	1941-1948	27,358	70	26,924	49
North York, Twp.:	5½%	1940-1941	8,500	00	8,593	11
	5½%	1940-1944	17,866	71	18,207	61
	5½%	1940-1943	25,811	14	26,245	89
	5½%	1943-1957	36,885	12	38,749	50
	5%	1940-1948	47,687	13	48,259	54
	5½%	1940-1958	24,469	63	25,794	98
	4½%	1939-1952	9,000	00	9,000	00
Ojibway, Town	.....	....	7,539	62	7,539	62
Orillia (Guaranteed by County of Simcoe)	5%	1941-1954	17,156	14	17,216	41
Oshawa:	6%	1945-1951	45,133	48	43,860	43
	5%	1939-1943	78,000	00	77,305	76
	5½%	1945-1949	100,000	00	98,948	68
Ottawa:	6%	July 1, 1951	15,000	00	16,456	26
	5½%	1951-1961	226,000	00	225,616	62
	5½%	July 1, 1961	114,000	00	113,415	93
	5½%	July 1, 1961	46,000	00	45,863	94
	5½%	July 1, 1961	10,000	00	12,822	23
Parry Sound:	6%	1939-1944	4,042	39	3,988	21
	6%	1939-1950	45,680	76	42,949	68
Pembroke	5%	1946-1954	75,025	53	75,025	53
Perth:	5%	1940-1948	91,000	00	92,004	05
	5%	1945-1950	21,000	00	20,853	49
Peterborough	4½%	June 30, 1951	50,000	00	44,073	65
Port Arthur:	5%	June 1, 1959	50,000	00	48,749	61
	5½%	June 1, 1948	53,000	00	49,699	93
Port Arthur (Guaranteeing General Hospital):	5½%	Nov. 1, 1955	100,000	00	104,218	36
	5½%	Oct. 1, 1954	40,000	00	41,513	41
Renfrew:	6%	1939-1947	4,603	32	4,634	74
	5%	1947-1958	55,034	42	55,325	71
Richmond Hill	5½%	1939-1944	3,437	22	3,437	22
Riverside	.....	....	6,399	65	6,399	65
St. Marys:	5%	Oct. 31, 1943	4,870	30	4,772	59
	5%	Jan. 1, 1944	2,500	00	2,446	38
St. Thomas	6%	1949-1951	44,646	59	43,296	10
Sandwich East, Twp.	.....	....	5,399	71	5,399	71
Sandwich West, Twp.:	.....	....	7,539	62	7,539	62
	6%	1938-1948	80,272	18	85,913	94
Sarnia:	5½%	Dec. 31, 1939	965	84	954	81
	5%	1942-1947	62,914	68	62,157	39
Sault Ste. Marie:	6%	Mar. 25, 1949	24,771	50	25,745	10
	5½%	April 1, 1950	45,000	00	41,720	82
	5½%	Jan. 20, 1945	6,000	00	6,132	39
	5½%	Jan. 20, 1945	4,000	00	4,054	47
	5½%	1939-1942	21,500	00	21,594	35
	5%	June 1, 1949	3,900	00	3,822	06
	5½%	Dec. 15, 1949	5,000	00	5,103	44

Table 14—Continued

Municipal Debentures—Continued

Security	Term	Face Rate	Par Value	Book Value
			$ c.	$ c.
Scarborough, Twp.:	5%	1940-1943	25,000 00	25,515 23
	5%	1942-1958	75,474 03	72,308 64
	5%	1933-1940	25,689 23	25,341 22
Simcoe, Town	6%	1939-1945	3,366 09	3,425 15
Sioux Lookout	6%	1944-1947	4,000 00	4,000 00
Smith's Falls:	5½%	1939-1944	2,205 99	2,205 99
	6%	1939-1946	8,571 59	8,743 70
	5½%	1939-1947	7,455 04	7,363 04
	5%	1940-1945	64,306 49	64,253 55
	5%	1944-1946	54,000 00	54,000 00
Stratford:	5%	Jan. 1, 1945	25,000 00	24,375 11
	5%	Jan. 1, 1945	15,000 00	14,626 00
	5%	Jan. 1, 1945	10,000 00	9,750 04
	5%	Jan. 1, 1945	13,000 00	12,588 00
	6%	Jan. 1, 1951	40,000 00	39,155 57
	5½%	Jan. 1, 1942	50,000 00	50,137 95
	5½%	Jan. 1, 1952	13,000 00	13,114 65
	5%	June 15, 1955	30,000 00	30,173 65
	5%	Jan. 1, 1945	2,000 00	2,008 66
Sudbury:	5%	1940-1949	49,943 48	48,616 19
	5%	1945-1948	66,235 66	66,001 06
	4½%	1939-1948	16,000 00	16,000 00
Thorold	5%	Aug. 15, 1958	3,000 00	2,945 55
Tillsonburg:	5½%	Mar. 20, 1945	975 00	975 00
	5½%	1939-1944	515 57	515 57
Toronto:	4½%	July 1, 1948	4,000 00	3,551 74
	4½%	Jan. 1, 1955	19,000 00	16,059 25
	5½%	1945-1947	11,000 00	10,669 53
	6%	1943-1951	48,000 00	48,000 00
	5½%	1940-1951	41,000 00	41,604 01
	6%	1945-1951	9,000 00	9,608 49
	5%	July 1, 1950	20,000 00	20,130 88
	5%	April 1, 1950	25,000 00	25,163 58
	4½%	June 1, 1946	7,000 00	6,804 63
	4½%	May. 1, 1945	2,000 00	1,950 49
	4½%	1944-1948	26,000 00	25,344 91
	5%	1947-1951	61,000 00	61,246 25
	5½%	Mar. 1, 1949	2,000 00	2,097 58
	6%	June 1, 1950	10,000 00	11,032 48
	5½%	1946-1958	53,000 00	53,784 82
	5½%	April 1, 1957	25,000 00	24,573 05
	5½%	1944-1947	35,000 00	34,625 24
	5½%	1958-1962	125,000 00	123,157 57
	5½%	1943-1944	17,000 00	16,851 75
	5½%	1945-1952	27,000 00	25,946 16
	5%	July 1, 1946	30,000 00	29,976 31
	5½%	April 1, 1952	5,000 00	5,193 42
	5½%	1950-1951	15,000 00	15,566 45
	5½%	April 1, 1951	11,000 00	11,454 66
	6%	1946-1951	20,000 00	21,549 23
	4½%	Aug. 1, 1951	28,000 00	26,061 72
	6%	July 1, 1951	10,000 00	10,024 59
	3½%	Dec. 1, 1962	54,000 00	54,868 35
Toronto Harbour Commission (Guaranteed by City of Toronto)	4½%	Sept. 1, 1953	14,000 00	13,123 97
Toronto, Twp.	5½%	1941-1952	18,104 29	18,841 36
Trenton	5½%	1942-1943	25,000 00	25,501 25
Welland, County	5%	Dec. 15, 1945	10,000 00	9,783 80
Weston	6%	1949-1952	24,949 65	27,234 37
West Gwillimbury (Guaranteed by County of Simcoe)	5½%	1942-1956	36,107 36	36,225 46

Table 14—Continued

Municipal Debentures—Continued

Security	Face Rate	Term	Par Value $ c.	Book Value $ c.
Wheatley	5½%	1951-1960	22,892 29	23,541 94
Whitby:	5½%	1939-1946	6,738 31	6,772 06
	5½%	1939-1946	2,440 77	2,453 78
	5½%	1939-1946	3,050 99	3,078 18
Windsor:	4%	Dec. 31, 1975	162,300 66	171,454 32
	4%	Dec. 31, 1975	145,738 15	151,342 16
	4%	Dec. 31, 1975	25,000 00	25,050 55
	4%	Jan. 1, 1948	698 72	698 72
	3¼%	Dec. 31, 1975	604,238 79	573,033 38
	3¼%	Dec. 31, 1975	110,000 00	104,321 29
	3¼%	Jan. 1, 1948	634 38	634 38
	2%	Dec. 31, 1975	145,738 17	100,579 01
	2%	Dec. 31, 1975	18,000 00	12,422 67
	2%	Jan. 1, 1948	679 06	679 06
	1½%	Dec. 31, 1975	598,654 36	351,318 31
	1½%	Dec. 31, 1975	15,000 00	8,802 71
	1½%	Jan. 1, 1948	819 22	819 22
York, Twp.:	5%	1941-1946	100,000 00	100,298 01
	6%	1941-1951	102,407 13	105,792 73
	5%	1949-1956	225,000 00	214,721 81
	5%	1942-1946	195,000 00	195,313 67
	5%	1945-1955	22,000 00	22,000 00
	5%	Feb. 1, 1952	25,000 00	25,437 71
	5½%	1941-1949	20,731 26	21,845 28
	6%	1941-1952	8,679 27	9,515 22
	6%	1941-1952	27,659 28	30,387 50
	5%	1945-1958	74,000 00	73,284 00
	5%	1945-1956	110,295 98	103,061 14
York Twp. (Guaranteed by County of York):	5%	1941-1956	93,000 00	89,163 09
	5%	1946-1957	21,000 00	21,101 36
			10,948,792 67	10,539,510 93

Other Permanent Investments

Security	Face Rate	Term	Par Value $ c.	Book Value $ c.
Canadian National Railways (Guaranteed by Dominion of Canada):	5%	Feb. 1, 1954	100,000 00	103,954 76
	5%	Feb. 1, 1954	50,000 00	51,917 78
	5%	Feb. 1, 1954	80,000 00	77,378 02
	5%	Feb. 1, 1954	36,000 00	34,683 85
	5%	Feb. 1, 1954	121,000 00	118,091 60
	5%	Feb. 1, 1954	247,000 00	242,033 38
	5%	Feb. 1, 1954	50,000 00	51,693 73
	5%	Feb. 1, 1954	23,000 00	23,794 08
	5%	Feb. 1, 1954	50,000 00	51,917 78
	5%	Feb. 1, 1954	50,000 00	51,772 43
	5%	Feb. 1, 1954	60,000 00	62,126 92
	5%	Feb. 1, 1954	25,000 00	25,913 07
	5%	Feb. 1, 1954	90,000 00	93,206 67
	5%	Feb. 1, 1954	463,000 00	453,682 87
	5%	Feb. 1, 1954	40,000 00	35,636 82
	5%	Feb. 1, 1954	115,000 00	132,159 20
	5%	Feb. 1, 1954	43,000 00	49,463 74
	5%	Feb. 1, 1954	100,000 00	115,697 11
	5%	Feb. 1, 1954	40,000 00	46,456 10
	5%	Feb. 1, 1954	25,000 00	28,332 59
	5%	Feb. 1, 1954	50,000 00	56,646 63
	5%	Feb. 1, 1954	25,000 00	28,214 85
	5%	Feb. 1, 1954	90,000 00	102,833 68
	5%	Feb. 1, 1954	50,000 00	58,120 03
	5%	Feb. 1, 1954	50,000 00	58,210 60

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value		Book Value	
			$	c.	$	c.
Canadian National Railways (Guaranteed by Dominion of Canada):	5%	Feb. 1, 1954	40,000	00	46,492	44
	5%	Feb. 1, 1954	32,000	00	37,193	95
	5%	Feb. 1, 1954	46,000	00	54,851	06
	5%	Feb. 1, 1954	50,000	00	59,271	16
	5%	Feb. 1, 1954	50,000	00	59,553	22
	4¾%	June 15, 1955	22,000	00	25,201	36
	4¾%	June 15, 1955	24,000	00	27,918	50
	4½%	July 1, 1957	100,000	00	110,611	47
	4½%	July 1, 1957	75,000	00	82,790	61
	4½%	July 1, 1957	100,000	00	110,611	42
	4½%	July 1, 1957	100,000	00	110,499	41
	4½%	July 1, 1957	100,000	00	110,723	42
	4½%	July 1, 1957	250,000	00	277,368	01
	4½%	July 1, 1957	60,000	00	66,769	67
	4½%	July 1, 1957	100,000	00	111,730	03
	4½%	July 1, 1957	120,000	00	134,775	78
	4½%	July 1, 1957	65,000	00	72,914	87
	4½%	July 1, 1957	75,000	00	83,380	26
	4½%	July 1, 1957	244,000	00	274,041	81
	4½%	July 1, 1957	52,000	00	59,035	96
	4½%	July 1, 1957	100,000	00	115,013	40
	4½%	July 1, 1957	117,000	00	133,158	05
	4½%	July 1, 1957	25,000	00	28,662	44
	4½%	July 1, 1957	30,000	00	33,597	69
	4½%	July 1, 1957	15,000	00	16,538	34
	4½%	July 1, 1957	50,000	00	56,274	05
	4½%	July 1, 1957	25,000	00	28,195	32
	4½%	July 1, 1957	50,000	00	56,038	42
	4½%	July 1, 1957	32,000	00	35,864	58
	4½%	July 1, 1957	23,000	00	25,886	12
	4½%	July 1, 1957	40,000	00	45,254	83
	4½%	July 1, 1957	50,000	00	57,480	77
	4½%	July 1, 1957	50,000	00	57,088	85
	4½%	July 1, 1957	50,000	00	57,135	45
	4½%	July 1, 1957	35,000	00	40,065	07
	4½%	July 1, 1957	50,000	00	57,135	45
	4½%	July 1, 1957	50,000	00	57,235	84
Dominion of Canada:	4½%	Nov. 1, 1948/58	465,000	00	493,971	53
	4½%	Nov. 1, 1948/58	30,000	00	32,250	99
	4½%	Nov. 1, 1948/58	100,000	00	107,879	28
	4½%	Nov. 1, 1948/58	50,000	00	54,039	54
	4½%	Nov. 1, 1948/58	200,000	00	216,078	02
	4½%	Nov. 1, 1949/59	100,000	00	108,458	96
	4½%	Nov. 1, 1949/59	135,000	00	150,815	62
	4½%	Nov. 1, 1949/59	59,000	00	66,064	67
Province of Ontario:	5½%	July 1, 1946	250,000	00	241,078	84
	5½%	July 1, 1946	100,000	00	97,078	21
	5½%	July 1, 1946	115,000	00	114,130	25
	5½%	July 1, 1946	15,000	00	16,445	54
	5½%	July 1, 1946	200,000	00	218,914	09
	5½%	July 1, 1946	25,000	00	27,371	42
	5½%	July 1, 1946	461,000	00	447,598	49
	5½%	July 1, 1946	34,000	00	37,566	50
	4½%	Dec. 1, 1947	13,000	00	12,199	98
	5½%	Feb. 1, 1947	125,000	00	120,800	21
	5½%	Feb. 1, 1947	226,000	00	226,588	79
	5½%	Feb. 1, 1947	145,000	00	146,006	48
	5½%	Feb. 1, 1947	116,000	00	116,564	20
	5½%	Feb. 1, 1947	10,000	00	9,751	88
	5½%	Feb. 1, 1947	100,000	00	99,703	73
	5½%	Feb. 1, 1947	10,000	00	11,039	93

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value		Book Value	
			$	c.	$	c.
Province of Ontario:	5½%	Feb. 1, 1947	62,000	00	68,560	62
	5½%	Feb. 1, 1947	35,000	00	38,657	05
	5½%	Feb. 1, 1947	91,500	00	94,745	56
	5½%	Feb. 1, 1947	50,000	00	53,148	87
	5½%	Feb. 1, 1947	150,000	00	167,221	13
	5½%	Feb. 1, 1947	25,000	00	27,774	65
	5½%	Feb. 1, 1947	25,000	00	28,376	18
	5%	Oct. 15, 1948	250,000	00	246,569	38
	5%	Oct. 15, 1948	50,000	00	50,493	16
	5%	Oct. 15, 1948	60,000	00	60,588	06
	5%	Oct. 15, 1948	25,000	00	25,252	78
	5%	Oct. 15, 1948	50,000	00	50,490	32
	5%	Oct. 15, 1948	50,000	00	50,871	99
	5%	Oct. 15, 1948	50,000	00	49,089	41
	5%	Oct. 15, 1948	50,000	00	56,281	73
	5%	Oct. 15, 1948	79,000	00	88,840	75
	5%	Oct. 15, 1948	50,000	00	55,349	30
	4½%	Jan. 16, 1949	207,000	00	189,481	57
	4½%	Jan. 16, 1949	158,000	00	145,249	72
	4½%	Jan. 16, 1949	25,000	00	26,256	65
	4½%	Jan. 16, 1949	83,000	00	79,654	93
	4½%	Jan. 16, 1949	74,000	00	79,049	32
	4½%	Dec. 1, 1949	300,000	00	276,450	60
	4½%	June 1, 1950	50,000	00	52,523	54
	4½%	June 1, 1950	290,000	00	317,253	46
	4½%	June 1, 1950	100,000	00	107,489	79
	4½%	June 1, 1950	135,000	00	145,041	43
	4½%	June 1, 1950	40,000	00	42,943	22
	4½%	June 1, 1950	35,000	00	37,959	32
	4½%	Dec. 1, 1950	700,000	00	642,025	52
	5%	April 1, 1952	100,000	00	115,515	25
	5%	April 1, 1952	42,000	00	48,732	04
	3%	Jan. 15, 1952	46,000	00	43,354	84
	4½%	May 15, 1954	10,000	00	10,870	00
	3%	Jan. 15, 1955	50,000	00	46,291	08
	3%	Jan. 15, 1958	500,000	00	497,631	09
	3%	Jan. 15, 1959	500,000	00	497,623	06
	4½%	1957-1970	25,000	00	28,969	92
	4%	May 15, 1957	100,000	00	105,368	80
	4½%	May 15, 1957	10,000	00	11,064	85
	4½%	Jan. 15, 1956	500,000	00	478,863	61
	4½%	Jan. 15, 1959	20,000	00	22,807	96
	4½%	Jan. 15, 1959	30,000	00	32,972	24
	5%	May 1, 1959	250,000	00	249,483	41
	5%	May 1, 1959	100,000	00	119,159	59
	5%	May 1, 1959	50,000	00	59,927	97
	5%	May 1, 1959	20,000	00	24,362	48
	5%	May 1, 1959	41,000	00	49,239	75
	5%	May 1, 1959	64,000	00	76,862	05
	5%	May 1, 1959	20,000	00	23,935	60
	5%	May 1, 1959	25,000	00	30,043	72
	5%	May 1, 1959	25,000	00	30,452	50
	5%	May 1, 1959	28,000	00	34,681	80
	5%	May 1, 1959	50,000	00	61,809	07
	4½%	1959-1965	45,000	00	50,682	79
	4%	1960-1966	44,000	00	45,600	19
	4%	1960-1971	318,000	00	343,279	81
	4%	1960-1968	156,000	00	168,026	91
	5%	Dec. 2, 1960	30,000	00	35,263	24
	5%	Dec. 2, 1960	18,000	00	22,107	70
	5%	Dec. 2, 1960	25,000	00	30,100	99
	5%	Dec. 2, 1960	126,000	00	152,110	65
	5%	Dec. 2, 1960	25,000	00	30,720	28
	5%	Dec. 2, 1960	32,000	00	38,606	54

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value	Book Value
			$ c.	$ c.
Province of Ontario:	5%	Dec. 2, 1960	25,000 00	30,849 36
	5%	Dec. 2, 1960	41,000 00	51,009 89
	4½%	Jan. 15, 1961	50,000 00	58,167 52
	4½%	Jan. 15, 1961	50,000 00	58,502 88
	4½%	Jan. 15, 1961	20,000 00	23,231 62
	4½%	May 15, 1961	29,000 00	33,323 68
	4½%	May 15, 1961	25,000 00	28,537 46
	4%	1961-1967	20,000 00	21,540 10
	4½%	Jan. 15, 1962	75,000 00	87,606 64
	4%	May 15, 1962	50,000 00	52,817 94
	4½%	May 15, 1962	25,000 00	29,105 57
	4%	1962-1968	6,000 00	6,393 18
	4%	1962-1970	106,000 00	112,912 48
	4%	1962-1967	296,000 00	315,271 94
	4½%	1962-1971	23,000 00	26,906 79
	4%	1963-1964	40,000 00	41,502 05
	4½%	Jan. 15, 1963	125,000 00	144,506 49
	4½%	Jan. 15, 1963	89,000 00	103,389 32
	4½%	Jan. 15, 1963	75,000 00	86,597 16
	4%	June 1, 1963	32,000 00	33,014 52
	4½%	Jan. 15, 1965	75,000 00	87,520 11
	4½%	Jan. 15, 1965	19,000 00	22,048 22
	4½%	Jan. 15, 1965	36,000 00	41,997 88
	4½%	Jan. 15, 1965	25,000 00	29,202 22
	4½%	Jan. 15, 1965	25,000 00	29,296 00
	4½%	May 15, 1965	50,000 00	58,308 01
	4%	June 1, 1965	20,000 00	21,418 26
	4½%	May 15, 1967	25,000 00	27,567 44
	4%	June 1, 1967	100,000 00	107,629 39
	4%	May 15, 1968	40,000 00	42,296 37
	4½%	May 15, 1968	50,000 00	58,508 71
	4½%	Jan. 15, 1969	100,000 00	117,689 63
	4½%	May 15, 1969	75,000 00	88,206 24
	4½%	Jan. 15, 1970	101,000 00	119,105 09
	4½%	Jan. 15, 1970	25,000 00	27,869 13
	4½%	Jan. 15, 1970	100,000 00	116,227 75
	4½%	Jan. 15, 1970	25,000 00	29,378 30
	4½%	Jan. 15, 1970	20,000 00	23,519 85
	4½%	1965-1970	65,000 00	76,060 74
	4½%	May 15, 1970	10,000 00	11,824 12
	4%	June 1, 1970	25,000 00	27,212 21
	4½%	Jan. 15, 1971	25,000 00	28,373 25
	4½%	Jan. 15, 1971	25,000 00	27,689 81
	4%	June 1, 1971	25,000 00	27,937 50
Province of Ontario guaranteed:				
Blind River, Town of	4½%	1939-1948	24,331 99	24,094 42
Englehart, Town of	6%	1945-1954	20,388 11	21,451 51
Hydro-Electric Power Comm'n.:	5%	July 1, 1945	78,000 00	72,577 74
	5%	July 15, 1946	50,000 00	47,178 77
	5%	July 15, 1946	50,000 00	46,423 59
	4%	Aug. 1, 1957	15,000 00	15,505 76
	4%	Aug. 1, 1957	25,000 00	25,842 91
	4%	Aug. 1, 1957	20,000 00	21,507 40
	4½%	April 1, 1960	20,000 00	21,425 00
	4½%	April 1, 1960	50,000 00	53,562 38
	4½%	April 1, 1960	24,000 00	26,072 64
	4½%	April 1, 1960	22,000 00	24,053 19
	4½%	April 1, 1960	22,000 00	24,945 64
	4½%	April 1, 1960	131,000 00	148,547 02
	4½%	April 1, 1960	25,000 00	28,348 67
	6%	July 1, 1961	120,000 00	155,383 40
	6%	July 1, 1961	25,000 00	33,041 72
	6%	July 1, 1961	100,000 00	127,316 20
	4¾%	Jan. 1, 1970	25,000 00	22,741 13

Table 14—Continued

Other Permanent Investments—Continued

Security	Face Rate	Term	Par Value		Book Value	
			$	c.	$	c.
Province of Ontario guaranteed:	4¾%	Jan. 1, 1970	41,000	00	45,900	51
	4¾%	Jan. 1, 1970	46,000	00	51,607	57
	4¾%	Jan. 1, 1970	154,000	00	172,900	94
	4¾%	Jan. 1, 1970	105,000	00	125,591	31
	4¾%	Jan. 1, 1970	13,000	00	15,496	64
	4¾%	Jan. 1, 1970	50,000	00	58,295	34
	4¾%	Jan. 1, 1970	57,000	00	68,354	75
	4¾%	Jan. 1, 1970	66,000	00	79,226	11
	4¾%	Jan. 1, 1970	50,000	00	60,019	85
	4¾%	Jan. 1, 1970	33,000	00	39,770	34
	4¾%	Jan. 1, 1970	75,000	00	90,241	00
	4¾%	Jan. 1, 1970	38,500	00	46,398	05
	4¾%	Jan. 1, 1970	10,000	00	11,753	79
	4¾%	Jan. 1, 1970	49,000	00	57,636	40
	4¾%	Jan. 1, 1970	100,000	00	117,535	97
	4¾%	Jan. 1, 1970	63,000	00	74,499	89
	4¾%	Jan. 1, 1970	95,000	00	91,271	80
	4¾%	Jan. 1, 1970	60,000	00	69,126	50
	4¾%	Jan. 1, 1970	18,500	00	21,122	13
	4¾%	Jan. 1, 1970	35,000	00	39,979	37
	4¾%	Jan. 1, 1970	100,000	00	117,198	30
	4¾%	Jan. 1, 1970	50,000	00	58,538	37
	4¾%	Jan. 1, 1970	125,000	00	146,345	94
	4¾%	Jan. 1, 1970	50,000	00	58,234	61
	4¾%	Jan. 1, 1970	38,000	00	44,073	41
	4¾%	Jan. 1, 1970	16,000	00	19,083	53
Sandwich, Windsor & Amherstburg Railway:	4½%	June 1, 1943	49,000	00	46,553	72
	4½%	June 1, 1943	25,000	00	25,769	80
Sturgeon Falls, Town	6%	1946-1952	40,092	65	49,874	10
Timiskaming & Northern Ontario Railway:	4%	1951-1952	269,000	00	275,184	72
	4%	1953-1957	160,000	00	169,122	16
	4%	Feb. 1, 1956	70,000	00	73,028	91
	4%	Feb. 1, 1959	145,000	00	123,143	35
	4%	1958-1967	112,000	00	118,505	07
	4%	Feb. 1, 1963	33,000	00	34,748	60
	4%	1967-1968	55,000	00	58,122	02
	4%	1960-1965	31,000	00	32,675	78
	4%	Feb. 1, 1967	100,000	00	105,622	21
	4%	Feb. 1, 1967	35,000	00	38,140	02
Tisdale, Twp.:	6%	1943-1944	14,226	05	15,104	51
	6%	1943-1944	6,713	43	7,128	46
			20,246,252	23	21,597,924	07
TOTAL PERMANENT INVESTMENTS, SCHEDULE 1			31,195,044	90	32,137,435	00

Table 14—Continued

SCHEDULE 2 FUNDS

Municipal Debentures

Security	Face Rate	Term	Par Value $ c.	Book Value $ c.
Barton, Twp.	5½%	July 14, 1952	63,000 00	63,900 43
Belleville:	5%	1943-1945	3,450 26	3,342 51
	5%	1943-1950	8,000 00	7,676 30
	5%	1940-1946	10,488 47	10,194 16
Brantford	4%	Dec. 31, 1949	15,000 00	13,254 77
Chippawa, Town (Guaranteed by County of Welland)	5½%	1941-1944	22,578 30	22,554 10
Cornwall	5½%	1941-1943	10,248 45	10,230 59
Etobicoke, Twp.:	5%	1941-1955	24,867 79	23,972 51
	5%	1941-1956	32,574 89	32,437 29
	5½%	1942-1956	58,470 29	60,443 89
	5%	1948-1955	43,000 00	40,960 35
Galt	5%	Dec. 15, 1965	19,460 45	18,516 59
Hamilton:	4½%	1942-1946	152,000 00	143,479 79
	4½%	1942-1946	134,000 00	127,446 62
	5%	1942-1946	35,000 00	34,248 37
Kingston	5%	July 1, 1955	70,000 00	66,576 34
Kitchener	6%	1944-1947	10,418 06	10,758 29
London:	5%	Dec. 30, 1954	411,000 00	391,686 02
	5%	1943-1956	241,000 00	235,199 00
	5%	1943-1955	63,000 00	61,974 67
North Bay	5½%	1940-1943	33,000 00	32,669 41
Ottawa	5%	1945-1946	10,000 00	9,662 97
Peterborough	5%	Dec. 31, 1945	20,000 00	19,416 09
Renfrew, Town	5½%	1949-1953	50,234 63	50,705 90
Stamford, Twp.	5½%	1941-1954	246,628 19	247,429 42
Stratford:	5.30%	July 1, 1954	82,000 00	82,858 40
	5%	1940-1956	122,613 19	118,854 38
Thorold, Town	5%	1940-1959	49,546 82	46,910 51
Toronto:	5%	1950-1951	50,000 00	48,878 23
	4½%	Jan. 1, 1949	5,000 00	4,620 84
	5%	July 1, 1950	4,000 00	3,849 63
Victoria, County	5%	1951-1959	17,954 20	16,945 06
Waterloo, Town	5½%	1941-1947	19,195 72	19,039 63
York, Twp.	5%	1944-1961	214,197 93	198,768 86
			2,351,927 64	2,279,461 92

Table 14—Continued

SCHEDULE 2 FUNDS

Other Permanent Investments

Security	Face Rate	Term	Par Value $ c.	Book Value $ c.
Canadian National Railways (Guaranteed by Dominion of Canada):	5%	Feb. 1, 1954	50,000 00	46,864 90
	5%	Feb. 1, 1954	50,000 00	58,119 34
	4½%	July 1, 1957	60,000 00	67,670 21
Dominion of Canada:	4½%	Nov. 1, 1948/58	50,000 00	53,751 81
	4½%	Nov. 1, 1949/59	562,000 00	626,536 15
Hydro-Electric Power Commission (Guaranteed by Province of Ontario):	4½%	April 1, 1960	50,000 00	55,897 59
	6%	July 1, 1961	28,000 00	35,519 88
	4¾%	Jan. 1, 1970	63,000 00	73,758 39
Province of Ontario:	5%	Oct. 1, 1942	31,000 00	30,428 49
	5%	Oct. 15, 1948	50,000 00	50,491 53
	5%	April 1, 1952	19,000 00	18,324 30
	4½%	1959-1970	30,000 00	34,882 10
	5%	Dec. 2, 1960	100,000 00	121,035 78
	4½%	1966-1968	15,000 00	17,249 90
	4½%	May 15, 1970	7,000 00	8,013 55
	4%	1970-1971	20,000 00	21,718 86
	4%	June 1, 1971	30,000 00	32,288 54
Timiskaming & Northern Ontario Railway (Guaranteed by Province of Ontario)	4%	1960-1966	35,000 00	35,846 24
			1,250,000 00	1,388,397 56
TOTAL PERMANENT INVESTMENTS, SCHEDULE 2			3,601,927 64	3,667,859 48

SHORT DATE DEPOSIT, SCHEDULE 1

Security	Face Rate	Term	Par Value $ c.	Book Value $ c.
Province of Ontario Savings Bank	1%		200,000 00	

CHAPTER V

1937 OPERATIONS

This chapter deals with the year 1937, containing information which was not available when the report for that year was made.

It gives the final financial statement for Schedule 1 industries for the year, estimates of the adjustments of assessments and of the outstanding compensation and medical aid having to be used in the provisional statement given in Table 1 of the 1937 report; and it gives statistical information as to the accidents which happened during 1937, their causes, the nature of the injuries suffered, the number, time loss, total and average cost of the different classes of cases, and the age, wage, nationality, and marital condition of the injured workmen.

This information is contained in Tables 15 to 26.

Final Financial Statement, Schedule 1, 1937

Table 15 gives the final financial statement for Schedule 1 industries for 1937, provisional figures for which were given in Table 1 of the 1937 report. It shows the income and credits and the expenditures and charges and the balance for each class of industry; also the actual assessments and accident cost and other items of income and expenditure for each class, and the assessments and accident cost for each group of industry within the class. The list of industries included in each class and group will be found in the Board's rate book, the list of industries in the different classes is also printed with the Act, and their general nature is indicated at the bottom of Table 1 of this report.

The net income and credits for all the classes for the year were $5,793,096.16, and the net expenditures and charges $5,822,169.78, leaving a deficit for the year of $29,073.62. Adding the surplus forward for prior years, $3,238,087.86, leaves a net actual surplus of $3,209,014.24, as compared with a provisional or estimated surplus of $3,634,789.21, the disparity being largely due to refund of excess rate collected under the differential rating plan, including $749,042.97 charged in 1936, and to claims for accidents occurring in 1937 and prior years not being finally disposed of in 1938.

Assessments and Accident Cost

The assessments and accident cost (the latter comprising compensation and medical aid and payments on account of rehabilitation but not including payments from the Silicosis Account) in Schedule 1 for each year since the commencement of the Act, and the totals to the end of 1937 are as follows:

Year	Assessments	Accident Cost
1915	$1,831,537 52	$1,091,020 43
1916	2,361,463 20	1,880,004 37
1917	2,662,383 29	2,639,560 56
1918	3,303,575 83	3,214,427 57
1919	3,840,949 07	4,474,847 38
1920	5,579,333 45	5,041,947 30
1921	4,594,452 37	4,277,034 67
1922	3,984,594 64	4,323,801 07
1923	3,771,321 09	4,977,331 82
1924	4,524,700 86	4,746,314 60
1925	4,390,854 75	4,438,802 13
1926	5,167,126 64	4,711,970 90
1927	5,465,763 17	5,082,073 61
1928	6,739,696 80	6,083,772 14

Year	Assessments	Accident Cost
1929	$7,505,431 10	$6,861,274 51
1930	6,396,105 73	5,925,502 17
1931	4,608,677 15	4,472,209 18
1932	3,292,309 25	3,177,386 47
1933	2,729,936 41	2,795,085 82
1934	4,192,200 35	3,904,134 13
1935	5,254,667 17	4,386,477 31
1936	6,075,763 79	4,543,669 26
1937	5,728,493 82	5,321,732 42
Totals	$104,001,337 45	$98,370,379 82

Pay Roll and Rates of Assessment

As assessments are in the form of a percentage of pay roll, the average rate paid by the employers in Schedule 1 can be determined by dividing the total assessments for the year by the total pay roll. The following table shows the total amount of pay roll and the total assessments and the average rate for $100 pay roll for each year:

Year	Total Pay Roll	Total Assessments	Average Rate per $100
1915	$147,603,000	$1,831,537 52	$1 24
1916	220,840,000	2,361,463 20	1 07
1917	286,903,000	2,662,383 29	93
1918	310,450,000	3,303,575 83	1 06
1919	325,226,000	3,840,949 07	1 18
1920	464,589,000	5,579,333 45	1 20
1921	355,259,000	4,594,452 37	1 29
1922	391,888,000	3,984,594.64	1 02
1923	434,163,000	3,771,321 09	87
1924	386,318,000	4,524,700 86	1 17
1925	390,652,000	4,390,854 75	1 04
1926	424,926,000	5,167,126 64	1 22
1927	455,016,000	5,465,763 17	1 20
1928	504,102,000	6,739,696 80	1 34
1929	559,429,000	7,505,431 10	1 34
1930	472,742,000	6,396,105 73	1 35
1931	389,740,000	4,608,677 15	1 18
1932	317,605,000	3,292,309 25	1 04
1933	288,917,000	2,729,936 41	94
1934	346,735,000	4,192,200 35	1 21
1935	386,782,000	5,254,667 17	1 36
1936	410,792,000	6,075,763 79	1 48
1937	517,621,000	5,728,493 82	1 11

Final Accident Figures, 1937

Table 16 shows the number of accidents happening in 1937 (in all industries under the Act) for which payment of compensation or medical aid was made. The total number was 62,042, of which 248 were death cases, 1,049 involving some degree of permanent disability, 26,427 temporary disability cases, and 34,318 cases which involved medical aid only. Ordinarily Schedule 2 cases involving medical aid only are not included, as in these cases medical aid is furnished directly by the employer.

The complete figures for each year since the commencement of the Act are as follows:

Year	Medical Aid Only	Temporary Disability	Permanent Disability	Death	Totals
1915............	*.....	9,311	1,339	296	10,946
1916............	*.....	15,993	2,232	373	18,598
1917............	†4,267	21,556	2,475	370	28,668
1918............	12,822	24,089	2,624	366	39,901
1919............	11,769	22,418	2,457	364	37,008
1920............	15,566	27,423	2,735	373	46,097
1921............	12,141	22,855	2,079	331	37,406
1922............	15,913	24,461	2,082	325	42,781
1923............	20,125	28,954	2,340	327	51,746
1924............	20,811	25,980	2,191	315	49,297
1925............	22,444	26,040	2,157	264	50,905
1926............	25,330	27,150	2,421	308	55,209
1927............	27,852	28,836	2,476	311	59,475
1928............	31,688	30,440	2,926	414	65,468
1929............	34,582	32,920	3,372	417	71,291
1930............	29,189	25,613	3,147	394	58,343
1931............	21,970	20,543	2,495	231	45,239
1932............	17,320	15,466	1,805	167	34,758
1933............	17,258	14,235	1,511	159	33,163
1934............	24,552	22,020	1,790	211	48,573
1935............	27,904	23,024	992	208	52,128
1936............	30,086	22,954	835	272	54,147
1937............	34,318	26,427	1,049	248	62,042
Totals......	457,907	538,708	49,530	7,044	1,053,189

*No Medical Aid. †Half Year Only.

Accident Frequencies, Schedule 1

Comparison of accident frequencies can be made by correlating the number of accidents with the total number of full-year workers, data for this being available, however, only in Schedule 1. Eliminating accidents in which medical aid only was paid, the number of accidents for each 100 full-year workers for the different years are:

Year	Temporary Disability	Permanent Disability	Death	Totals
1915.........	3.63	.58	.12	4.32
1916.........	4.99	.79	.10	5.88
1917.........	5.78	.72	.07	6.57
1918.........	5.81	.66	.07	6.54
1919.........	5.81	.68	.07	6.56
1920.........	6.23	.67	.07	6.97
1921.........	6.25	.60	.05	6.90
1922.........	5.82	.52	.06	6.40
1923.........	6.02	.51	.05	6.58
1924.........	6.08	.54	.06	6.68
1925.........	5.94	.51	.05	6.50
1926.........	5.84	.54	.05	6.43
1927.........	5.94	.53	.05	6.52
1928.........	5.85	.58	.07	6.50
1929.........	5.80	.61	.06	6.47
1930.........	5.08	.66	.07	5.81
1931.........	4.28	.56	.04	4.88
1932.........	3.59	.45	.03	4.07
1933.........	3.22	.37	.03	3.62
1934.........	3.94	.37	.04	4.35
1935.........	4.18	.19	.04	4.41
1936.........	4.31	.16	.04	4.51
1937.........	4.47	.18	.04	4.69

On the same basis of calculation, the frequency of medical aid only cases has been: 1918, 3.66; 1919, 3.70; 1920, 4.26; 1921, 4.24; 1922, 4.67; 1923, 4.96; 1924, 5.84; 1925, 6.09; 1926, 6.37; 1927, 6.73; 1928, 7.09; 1929, 7.06; 1930, 6.84; 1931, 5.72; 1932, 5.06; 1933, 4.94; 1934, 5.65; 1935, 6.16; 1936, 6.55; 1937, 6.63.

Statistical Distributions

Tables 17 to 26 give statistical details regarding accidents and workmen, including, where the data is available, Schedule 2 and Crown cases as well as Schedule 1. Consideration of space preclude more extensive tabulations, but the original material is retained and still fuller information is always available concerning the accidents in any of the different classes of industry.

Month of Occurrence

Table 17 gives the month of occurrence of all accidents. The month in which the greatest number occurred during 1937 was July, with 6,135, and the month with the lowest number was April, with 4,193.

Accidents According to Locality

The distribution of accidents according to the county or district in which they occurred is contained in Table 18. York had the highest number with 13,818, and next in order were: Timiskaming-Cochrane, with 5,969; Wentworth, with 3,871; Thunder Bay, with 3,585; and Essex, with 3,137. The greatest number of deaths (33) were in Timiskaming-Cochrane; there were 28 in York; 19 in Subdury; 18 in Thunder Bay; and 15 in Wentworth.

Time Loss, Age, and Wage

In Table 19 are given the average age and wage of workmen receiving compensation and the total and average time loss for each class of industry, and for each category of disability. The average age for 1937 was 35.54 years. The average wage for 1937 was $19.97, as compared with $18.82 for 1936, and $17.60 for 1935. The total time loss in temporary disability cases was 720,076 days, or an average of 27.25 days, as compared with an average of 27.52 days in 1936, and 29.86 days in 1935.

Compensation and Medical Aid Costs, Schedule 1

Table 20 contains the total and average cost of compensation and medical aid by classes in Schedule 1 for each kind of disability.

The total cost of all accidents was $5,321,732.42, of which $4,066,688.82 was for compensation (including payments for rehabilitation but not for silicosis cases) and $1,255,043.60 was for medical aid (except in silicosis cases).

Of the $4,066,688.82 compensation cost, $1,764,968.59 was for temporary disability cases, $1,560,291.73 was for permanent disability cases, and $741,428.50 was for death cases.

The average cost of temporary disability cases was $113.34, of which $77.21 was for compensation and $36.13 was for medical aid, the average in 1936 being $103.65.

The average cost of permanent disability cases was $1,890.06, of which $325.78 was for temporary disability, $1,332.35 was for permanent disability, and $231.93 was for medical aid.

The average cost of death cases, where there were dependants, was $5,614.02, and the average cost of all death cases was $3,863.08, of which $43.40 was for temporary disability, $123.57 for burial expenses, $3,615.83 for death benefits, and $80.28 for medical aid.

The average cost of all cases in which compensation was paid was $213.65, of which $169.48 was for compensation, and $44.17 was for medical aid, as compared with $213.81 for 1936, and $220.17 for 1935.

The average cost of medical aid in medical aid only cases was $5.76, as compared with $5.93 in 1936, and $5.93 in 1935.

Allegiance of Injured

Table 21 shows the allegiance of injured workers who received compensation, as taken from their own reports. There were 24,817, or nearly 90 per cent., of British allegiance, and 2,788 of foreign allegiance. Among the aliens the most numerous were: Poles, Finns, Russians, Czechs, and Italians.

Sex and Marital Condition of Injured

Table 22 gives the sex and marital condition of those receiving compensation. There were 27,452 males and 272 females. Of the males, 15,534 were married, and 50 of the females. There were 480 widowers and 48 widows.

Duration of Disability

Table 23 shows the week of termination of temporary disability cases. In nearly 41 per cent. of the cases the disability terminated in from one to two weeks. In 59 cases the disability lasted for more than a year.

Nature of Injuries

The first part of Table 24 shows the number of various kinds of temporary disability injuries in the different classes of industry; the second part gives an analysis of the permanent disability cases, showing the number of injuries to the several parts of the body and the percentages of impairment of earning capacity; and the third part of the table shows the number and nature of the industrial disease cases.

In 1937 there were 8,637 cuts, lacerations, and punctures; 6,140 bruises, contusions, and abrasions; 3,830 fractures; 3,407 sprains, strains, twistings, and wrenchings; 1,514 crushes; 987 scalds and burns; 710 injuries to eyes; 230 dislocations; and 459 herniae.

Among the 1,049 permanent disability cases were 22 permanent total disability cases, and 355 exceeded ten per cent. of working capacity.

There were 55 industrial disease cases, of which 5 involved medical aid only; 39 were temporary disability cases; 5 were permanent disability cases; and 6 were death cases. Included in these totals are 33 cases of lead poisoning, 14 cases of silicosis and pneumoconiosis, 2 cases of chrome poisoning, and 6 cases of arsenical poisoning.

Causes of Accidents

Table 25 gives the prime causes of accidents in 1937. Machinery was responsible for 11,166 out of a total of 62,042, or 18 per cent. of all cases, as compared with 17 per cent. in 1936, and 16.1 per cent. in 1935.

Death Cases

The nature of awards, the number, relationship, and residence of dependants, are shown in Table 26.

TABLE 15

FINAL FINANCIAL STATEMENT FOR 1937, SCHEDULE 1

BY CLASSES

Class	Income and Credits	Expenditure and Charges	Balance for 1937	Balance Forward Prior Years	Balance at Dec. 31, 1937	Class
	$ c.	$ c.	$ c.	$ c.	$ c.	
1	737,742 58	642,407 34	95,335 24	−164,571 33	−69,236 09	1
2	358,121 15	341,006 01	17,115 14	154,262 22	171,377 36	2
3	55,890 96	52,834 55	3,056 41	7,771 67	10,828 08	3
4	134,998 92	146,066 92	−11,068 00	−14,280 89	−25,348 89	4
5	862,430 50	**1,112,680 89	−250,250 39	1,232,455 47	982,205 08	5
6	149,685 38	173,736 27	−24,050 89	123,039 88	98,988 99	6
7	84,064 14	100,921 31	−16,857 17	133,521 18	116,664 01	7
8	168,331 15	142,571 39	25,759 76	117,688 70	143,448 46	8
9	120,774 79	134,990 97	−14,216 18	246,259 19	232,043 01	9
10	317,113 46	337,712 81	−20,599 35	218,341 39	197,742 04	10
11	281,656 24	224,848 50	56,807 74	100,021 87	156,829 61	11
12	191,088 32	124,106 92	66,981 40	110,138 32	177,119 72	12
13	57,893 22	71,827 20	−13,933 98	29,595 53	15,661 55	13
14	65,999 91	47,069 52	18,930 39	−3,299 54	15,630 85	14
15	273,381 61	272,093 24	1,288 37	12,146 72	13,435 09	15
16	83,456 58	80,180 01	3,276 57	85,243 48	88,520 05	16
17	84,421 13	110,866 79	−26,445 66	57,373 46	30,927 80	17
18	52,341 50	50,913 97	1,427 53	58,598 80	60,026 33	18
19	82,815 50	76,572 77	6,242 73	29,673 07	35,915 80	19
20	276,068 74	301.559 55	−25,490 81	95,755 79	70,264 98	20
21	340,519 53	347.032 77	−6,513 24	135,335 91	128,822 67	21
22	219,333 83	189,314 27	30,019 56	72,107 01	102,126 57	22
23	87,918 54	102,401 77	−14,483 23	334,934 48	320,451 25	23
24	707,048 48	638,454 04	68,594 44	65,975 48	134,569 92	24
	†5,793,096 16	*5,822.169 78	−29,073 62	3.238,087 86	3,209,014 24	

†Includes: $20,803.19 reimbursement from D.P. & N.H.:

Disaster Reserve—Class 6	$6,875 00
Class 10	14,492 95
Class 20	1,776 71
Assessments refunded in 1938 for Differential Rating charged in 1936	749,042 97

*Includes $6,294.70 for Rehabilitation.
**Includes $12,930.31 for Mine Rescue Work.

Table 15—Continued
BY GROUPS

Group and Class	Assessments and Compensation		Other Credits and Charges			
	Assessments	Compensation and Medical Aid	Sections 8, 107, 114 (3), Etc.	Administration Expenses and Safety Assns.	Balance Forward Prior Years	Balance at December 31, 1937
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 010	408,461 71	231,391 44				
“ 011	100,415 13	68,129 31				
“ 012	223,802 87	279,812 39				
Class 1	732,679 71	579,333 14	5,062 87	63,074 20	−164,571 33	−69,236 09
Group 020	177,223 40	125,002 11				
“ 021	22,415 34	59,960 92				
“ 022	158,265 37	125,621 30				
Class 2	357,904 11	310,584 33	217 04	30,421 68	154,262 22	171,377 36
Group 030	55,719 80	46,602 36				
Class 3	55,719 80	46,602 36	171 16	6,232 19	7,771 67	10,828 08
Group 040	89,421 21	85,606 19				
“ 041	19,716 06	12,207 30				
“ 042	9,916 69	11,389 11				
“ 043	3,304 95	6,182 89				
“ 044	11,721 42	17,091 50				
Class 4	134,080 33	132,476 99	918 59	13,589 93	−14,280 89	−25,348 89
Group 051	516,809 45	799,955 15				
“ 052	265,724 30	163,836 76				
“ 055	37,349 96	52,985 49				
“ 056	36,843 94	11,033 28				
“ 057	3,583 42	39 00				
Class 5	860.311 07	1,027,849 68	2,119 43	84,831 21	1,232,455 47	982,205 08
Group 060	12,705 30	23,465 66				
“ 061	44,476 05	42,906 66				
“ 062	9,093 84	4,231 62				
“ 063	24,556 02	17,060 11				
“ 064	18,749 32	6,968 93				
“ 065	16,703 83	51,384 10				
“ 066	16,216 57	11,282 96				
Class 6	142,500 93	157,300 04	7,184 45	16.436 23	123,039 88	98,988 99
Group 070	84,064 14	91,229 30				
Class 7	84,064 14	91,229 30		9.692 01	133,521 18	116,664 01
Group 080	89,995 85	59,998 84				
“ 082	62,996 04	59,671 73				
“ 083	15,186 74	8,803 36				
Class 8	168,178 63	128,473 93	152 52	14,097 46	117,688 70	143,448 46
Group 090	29,306 88	22,324 92				
“ 091	15,398 38	22,548 08				
“ 092	15,788 26	12,228 15				
“ 094	50,167 33	54,641 11				
“ 095	8,349 32	7,162 06				
Class 9	119,010 17	118,904 32	1,764 62	16,086 65	246,259 19	232,043 01

Table 15—Continued

BY GROUPS

Group and Class	Assessments and Compensation		Other Credits and Charges			
	Assessments	Compensation and Medical Aid	Sections 8, 107, 114 (3), Etc.	Administration Expenses and Safety Assns.	Balance Forward Prior Years	Balance at December 31, 1937
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 100	95,567 63	76,728 34				
" 101	72,267 93	72,095 76				
" 102	36,453 49	64,261 62				
" 103	29,215 52	14,713 23				
" 104	13,347 61	18,111 45				
" 105	17,536 93	21,970 38				
" 106	28,417 41	26,811 21				
" 107	7,412 07	7,293 15				
Class 10	300,218 59	301,985 14	16,894 87	35,727 67	218,341 39	197,742 04
Group 110	68,447 06	27,707 81				
" 111	187,579 15	147,360 59				
" 113	24,707 94	20,324 73				
Class 11	280,734 15	195,393 13	922 09	29,455 37	100,021 87	156,829 61
Group 120	65,258 86	42,509 25				
" 121	40,747 75	24,475 17				
" 122	47,035 39	7,382 88				
" 123	10,945 05	4,796 86				
" 124	24,879 11	25,106 56				
Class 12	188,866 16	104,270 72	2,222 16	19,836 20	110,138 32	177,119 72
Group 130	37,381 25	54,816 10				
" 131	20,306 21	13,391 04				
Class 13	57,687 46	68,207 14	205 76	3,620 06	29,595 53	15,661 55
Group 140	65,812 84	40,603 53				
Class 14	65,812 84	40,603 53	187 07	6,465 99	−3,299 54	15,630 85
Group 150	78,811 24	70,606 73				
" 151	55,336 94	54,100 11				
" 152	16,313 03	19,329 11				
" 153	36,150 50	41,738 16				
" 154	25,121 83	9,389 18				
" 155	50,423 16	39,814 55				
" 156	7,443 72	4,410 09				
Class 15	269,600 42	239,387 93	3,781 19	32,705 31	12,146 72	13,435 09
Group 160	30,051 76	19,477 84				
" 161	8,685 35	7,518 53				
" 162	9,553 25	6,970 12				
" 163	14,296 64	16,102 67				
" 164	20,542 89	19,231 08				
Class 16	83,129 89	69,300 24	326 69	10,879 77	85,243 48	88,520 05
Group 170	40,941 06	64,910 70				
" 171	32,680 85	28,822 13				
" 172	10,596 81	4,007 69				
Class 17	84,218 72	97,740 52	202 41	13,126 27	57,373 46	30,927 80

Table 15—Continued

BY GROUPS

Group and Class	Assessments and Compensation		Other Credits and Charges			
	Assessments	Compensation and Medical Aid	Sections 8, 107, 114 (3), Etc.	Administration Expenses and Safety Assns.	Balance Forward Prior Years	Balance at December 31, 1937
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
Group 180	25,637 92	31,671 22				
" 181	26,369 81	12,080 24				
Class 18	52,007 73	43,751 46	333 77	7,162 51	58,598 80	60,026 33
Group 190	20,937 73	10,973 27				
" 191	43,713 61	34,370 12				
" 192	9,830 71	12,754 51				
" 193	7,852 54	8,837 06				
Class 19	82,334 59	66,934 96	480 91	9,637 81	29,673 07	35,915 80
Group 200	182,968 72	182,188 56				
" 201	88,692 23	103,566 43				
Class 20	271,660 95	285,754 99	4,407 79	15,804 56	95,755 79	70,264 98
Group 210	315,545 37	303,013 69				
" 211	26,274 83	29,614 15				
Class 21	341,820 20	332,627 84	−1,300 67	14,404 93	135,335 91	128,822 67
Group 220	36,123 42	36,131 22				
" 221	29,312 51	17,497 29				
" 222	51,370 86	35,569 61				
" 223	100,653 45	85,030 91				
Class 22	217,460 24	174,229 03	1,873 59	15,085 24	72,107 01	102,126 57
Group 230	33,617 92	42,941 29				
" 231	36,519 15	34,874 28				
" 232	17,276 34	23,020 15				
Class 23	87,413 41	100,835 72	505 13	1,566 05	334,934 48	320,451 25
Group 240	458,993 85	401,709 96				
" 241	16,014 99	20,735 17				
" 243	23,650 89	23,686 18				
" 244	60,436 32	36,462 19				
" 245	58,631 28	52,994 59				
" 246	36,879 85	45,397 19				
" 247	28,836 20	23,107 46				
" 249	7,636 20	3,863 24				
Class 24	691,079 58	607,955 98	15,968 90	30,498 06	65,975 48	134,569 92
Schedule 1	††5,728,493 82	*5,321,732 42	†64,602 34	**500,437 36	3,238,087 86	3,209,014 24

†Includes:		
Reimbursement from D.P. & N.H.		$20,803 19
Disaster Reserve—Class 6		6,875 00
	Class 10	14,492 95
	Class 20	1,776 71

††Includes assessments refunded in 1938 for Differential Rating charged in 1936—$749,042.97.

*Includes $6,294.70 for Rehabilitation.

**Includes $12,930.31 for Mine Rescue Work.

TABLE 16

NUMBER OF ACCIDENTS IN 1937 INVOLVING PAYMENT

Class	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
1	1,014	3,770	121	24	4,929
2	1,707	2,000	49	8	3,764
3	539	312	23	..	874
4	783	539	53	2	1,377
5	2,689	2,688	142	54	5,573
6	589	412	19	5	1,025
7	703	239	34	7	983
8	1,155	517	18	5	1,695
9	1,826	514	28	3	2,371
10	4,310	1,357	96	7	5,770
11	4,576	937	41	4	5,558
12	903	445	20	5	1,373
13	287	229	15	3	534
14	636	207	6	1	850
15	2,431	1,415	42	4	3,892
16	837	351	21	1	1,210
17	952	491	20	4	1,467
18	957	428	8	..	1,393
19	956	412	16	1	1,385
20	1,123	1,287	41	10	2,461
21	1,482	1,548	33	23	3,086
22	786	579	9	6	1,380
23	507	323	15	8	853
24	2,113	1,858	71	11	4,053
Totals	33,861	22,858	941	196	57,856
Schedule 2	9	1,537	63	32	1,641
Crown Cases	448	2,032	45	20	2,545
GRAND TOTALS	34,318	26,427	1,049	248	62,042

TABLE 17

MONTH OF OCCURRENCE OF ACCIDENTS, 1937

Month of Occurrence	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
January	2,292	2,069	93	18	4,472
February	2,269	1,921	70	15	4,275
March	2,579	1,880	64	21	4,544
April	2,538	1,565	70	20	4,193
May	2,764	1,807	80	15	4,666
June	3,295	2,330	95	27	5,747
July	3,458	2,553	100	24	6,135
August	3,305	2,445	92	17	5,859
September	3,317	2,602	113	27	6,059
October	3,177	2,600	86	15	5,878
November	2,859	2,516	91	13	5,479
December	2,465	2,139	95	36	4,735
TOTALS	34,318	26,427	1,049	248	62,042

TABLE 18

LOCALITY OF ACCIDENTS, 1937

County or District	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
Algoma	540	892	23	10	1,465
Brant	716	349	20	..	1,085
Bruce	80	144	10	2	236
Carleton	761	706	24	2	1,493
Dufferin	11	19	2	..	32
Dundas	19	59	2	1	81
Durham	162	89	2	1	254
Elgin	221	195	9	7	432
Essex	2,388	703	39	7	3,137
Frontenac	521	331	12	4	868
Glengarry	52	54	1	..	107
Grenville	73	48	1	1	123
Grey	279	231	10	2	522
Haldimand	76	72	6	..	154
Haliburton	37	87	4	2	130
Halton	251	185	1	2	439
Hastings	332	509	13	4	858
Huron	97	144	6	..	247
Kenora	347	652	18	12	1,029
Kent	455	239	7	3	704
Lambton	383	215	3	1	602
Lanark	172	161	6	2	341
Leeds	275	237	6	3	521
Lennox-Addington	54	47	2	1	104
Lincoln	768	405	26	6	1,205
Manitoulin	20	45	1	1	67
Middlesex	799	556	33	1	1,389
Muskoka	207	292	18	3	520
Nipissing	256	691	18	4	969
Norfolk	204	108	4	..	316
Northumberland	99	95	5	..	199
Ontario	1,580	242	12	3	1,837
Oxford	482	294	10	4	790
Parry Sound	225	531	18	4	778
Patricia	197	216	10	1	424
Peel	132	122	1	1	256
Perth	230	189	14	3	436
Peterborough	442	278	8	3	731
Prescott	79	34	4	..	117
Prince Edward	122	53	2	..	177
Rainy River	108	406	9	7	530
Renfrew	257	431	15	4	707
Russell	3	9	1	..	13
Simcoe	410	412	20	2	844
Stormont	343	218	8	4	573
Sudbury	635	1,014	65	19	1,733
Timiskaming-Cochrane	2,704	3,122	110	33	5,969
Thunder Bay	1,136	2,365	66	18	3,585
Victoria	126	139	5	3	273
Waterloo	1,401	616	36	6	2,059
Welland	1,288	662	33	6	1,989
Wellington	524	276	13	..	813
Wentworth	2,692	1,089	75	15	3,871
York	8,539	5,076	175	28	13,818
Not in Ontario	8	73	7	2	90
TOTALS	34,318	26,427	1,049	248	62,042

TABLE 19

TIME LOSS, AVERAGE AGE, AND AVERAGE WAGE, 1937

Class	TIME LOSS*						AGE	WAGE
	Temporary Disability		Permanent Disability		Death Cases		All Cases	All Cases
	Total Days	Average Days	Total Days	Average Days	Total Days	Average Days	Average Age (Years)	Average Weekly Wage
1	107,893	28.62	15,124	124.99	49	2.04	34.10	$14.78
2	47,498	23.75	6,194	126.41	1	.13	34.25	19.43
3	6,094	19.53	1,662	72.26	....	.....	35.74	16.48
4	12,376	22.96	6,653	125.53	37	18.50	35.20	15.54
5	80,483	29.94	21,606	152.15	938	17.37	32.60	30.64
6	13,755	33.39	4,458	234.63	399	79.80	35.89	17.50
7	5,516	23.08	3,058	89.94	1	.14	36.12	24.68
8	12,940	25.03	3,788	210.44	432	86.40	38.28	20.06
9	12,175	23.69	4,926	175.93	2	.67	37.79	20.41
10	28,772	21.20	7,775	80.99	403	57.57	33.88	19.78
11	25,135	26.82	3,568	87.02	102	25.50	35.49	22.28
12	13,766	30.93	5,149	257.45	47	9.40	38.59	20.84
13	6,055	26.44	2,262	150.80	78	26.00	39.33	18.32
14	4,162	20.11	309	51.50	0	0	34.97	20.21
15	34,874	24.65	6,073	144.60	0	0	33.36	18.80
16	8,124	23.15	2,406	114.57	0	0	32.91	17.45
17	10,622	21.63	2,517	125.85	23	5.75	33.26	16.10
18	7,997	18.68	1,697	212.13	....	.....	30.97	16.44
19	9,475	23.00	1,466	91.63	0	0	30.65	17.68
20	40,958	31.82	9,025	220.12	16	1.60	34.95	17.34
21	44,423	28.70	5,557	168.39	12	.52	34.72	19.60
22	14,282	24.67	897	99.67	113	18.83	35.47	17.13
23	9,590	29.69	2,975	198.33	0	0	36.47	21.88
24	55,004	29.60	16,026	225.72	324	29.45	37.99	20.20
Schedule 2	52,474	34.14	17,757	281.86	394	12.31	41.22	22.01
Crown....	55,633	27.38	13,107	291.27	385	19.25	40.88	20.60
ALL.....	720,076	27.25	166,035	158.28	3,756	15.15	35.54	19.97

*This does not include loss of man power by permanent impairment or death.

TABLE 20

TOTAL AND AVERAGE COMPENSATION AND MEDICAL AID COSTS, 1937, SCHEDULE 1, BY CLASSES

Compensation Costs

Class	Temporary Disability Cases		Permanent Disability Cases				Death Cases						ALL CASES	
	For Temporary Disability		For Temporary Disability		For Permanent Disability		For Temporary Disability		For Death Benefits		For Funeral Expenses			
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	241,876 16	64 16	28,674 85	236 98	102,825 23	849 80	97 92	4 08	44,335 00	1,847 29	2,924 90	121 87	420,734 06	107 47
2	127,056 10	63 53	15,360 86	313 49	60,670 19	1,238 17	2 08	26	26,687 00	3,335 88	959 85	119 98	230,736 08	112 17
3	16,701 75	53 53	3,423 24	148 84	13,954 00	606 70	....	....	....	....	....	....	34,078 99	101 73
4	25,570 09	47 44	12,473 40	235 35	52,449 18	989 61	35 42	17 71	15,222 00	7,611 00	250 00	125 00	106,000 09	178 45
5	262,540 04	97 67	66,303 67	466 93	345,473 05	2,432 91	3,369 94	62 41	164,381 00	3,044 09	6,736 30	124 75	848,804 00	294 31
6	67,766 18	164 48	10,445 97	549 79	34,615 00	1,821 84	828 55	165 71	14,832 00	2,966 40	613 05	122 61	129,100 75	296 10
7	18,637 40	77 98	7,479 55	219 99	28,464 50	837 19	0	0	17,156 00	2,450 86	875 00	125 00	72,612 45	259 33
8	49,997 92	96 71	9,107 48	505 97	13,406 00	744 78	933 52	186 70	25,793 00	5,158 60	625 00	125 00	99,862 92	184 93
9	30,907 65	60 13	10,664 98	380 89	21,933 00	783 32	0	0	22,923 53	7,641 18	375 00	125 00	86,804 16	159 27
10	85,387 47	62 92	17,713 07	184 51	80,394 05	837 44	1,126 13	160 88	36,985 00	5,283 57	875 00	125 00	222,480 72	152 38
11	50,610 85	54 01	7,907 83	192 87	32,284 75	787 43	238 00	59 50	31,150 00	7,787 50	500 00	125 00	122,691 43	124 94
12	33,914 19	76 21	3,858 98	192 95	11,375 00	568 75	104 53	20 91	22,527 00	4,505 40	614 85	122 97	72,394 55	154 03
13	19,529 63	85 28	4,921 45	328 10	21,456 75	1,430 45	172 93	57 64	7,837 00	2,612 33	375 00	125 00	54,292 76	219 81
14	12,687 00	61 29	765 85	127 64	8,564 00	1,427 33	0	0	6,619 00	6,619 00	125 00	125 00	28,760 85	134 40
15	90,984 63	64 30	11,815 28	281 32	48,676 25	1,158 96	0	0	16,682 00	4,170 50	500 00	125 00	168,658 16	115 44
16	20,662 13	58 87	5,673 75	270 18	17,702 75	842 99	0	0	5,410 00	5,410 00	125 00	125 00	49,573 63	132 91
17	28,643 96	58 34	4,870 90	243 55	17,330 86	866 54	47 59	11 90	20,847 00	5,211 75	500 00	125 00	72,240 30	140 27
18	16,316 36	38 12	2,919 57	364 95	9,998 00	1,249 75	....	....	....	....	....	....	29,233 93	67 05
19	24,550 78	59 59	2,900 42	181 28	11,575 27	723 45	0	0	7,570 00	7,570 00	125 00	125 00	46,721 47	108 91
20	91,267 50	70 91	18,623 95	454 24	60,754 02	1,481 81	29 92	2 99	45,792 00	4,579 20	1,250 00	125 00	217,717 39	162 72
21	118,825 90	76 76	11,930 79	361 54	48,731 75	1,476 72	21 88	95	73,240 00	3,184 35	2,875 00	125 00	255,625 32	159 37
22	84,027 55	145 13	1,955 56	217 28	11,218 50	1,246 50	235 42	39 24	38,376 00	6,396 00	750 00	125 00	136,563 03	229 90
23	31,739 13	98 26	8,623 99	574 93	22,271 50	1,484 77	0	0	19,795 00	2,474 37	875 00	109 38	83,304 62	240 76
24	214,768 22	115 59	38,138 99	537 17	177,613 75	2,501 60	1,263 20	114 84	44,543 00	4,049 36	1,370 00	124 55	477,697 16	246 24
ALL....	1,764,968 59	77 21	306,554 38	325 78	1,253,737 35	1,332 35	8,507 02	43 40	708,702 53	3,615 83	24,218 95	123 57	4,066,688 82	169 48

TABLE 20—Continued

Medical Aid Costs

Class	When Medical Aid Only		In Temporary Disability Cases		In Permanent Disability Cases		In Death Cases		FOR ALL CASES	
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average
	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.	$ c.
1	5,314 06	24	128,274 66	34 03	24,298 36	200 81	712 00	29 67	158,599 08	32 18
2	9,189 29	5 38	59,525 51	29 76	10,857 25	221 58	276 20	34 53	79,848 25	21 21
3	2,838 90	5 27	7,917 57	25 38	1,766 90	76 82	....	......	12,523 37	14 33
4	4,200 10	5 36	12,059 53	22 37	9,515 27	179 53	702 00	351 00	26,476 90	19 23
5	18,686 40	6 95	111,552 83	41 50	43,973 13	309 67	4,833 32	89 51	179,045 68	32 13
6	3,390 95	5 76	17,493 20	42 46	6,580 27	346 33	734 87	146 97	28,199 29	27 51
7	4,751 65	6 76	6,972 35	29 17	6,768 75	199 08	124 10	17 73	18,616 85	18 94
8	5,794 05	5 02	17,131 58	33 14	5,409 63	300 54	275 75	55 15	28,611 01	16 88
9	9,108 98	4 99	17,359 55	33 77	5,348 63	191 02	283 00	94 33	32,100 16	13 54
10	22,588 55	5 24	44,318 33	32 66	11,255 04	117 24	1,342 50	192 79	79,504 42	13 78
11	28,024 38	6 12	36,299 23	38 74	7,370 39	179 77	1,007 70	251 93	72,701 70	13 08
12	6,173 68	6 84	19,156 84	43 05	5,791 45	289 57	754 20	150 84	31,876 17	23 22
13	1,688 15	5 88	7,851 23	34 28	3,798 50	253 23	576 50	192 17	13,914 38	26 06
14	3,901 27	6 13	7,238 96	34 97	584 50	97 42	117 95	117 95	11,842 68	13 93
15	14,369 92	5 91	47,354 13	33 47	8,995 72	214 18	10 00	2 50	70,729 77	18 17
16	5,503 90	6 58	10,227 67	29 14	3,963 04	188 72	32 00	32 00	19,726 61	16 30
17	5,168 60	5 43	16,109 35	32 81	4,023 77	201 19	198 50	49 63	25,500 22	17 38
18	5,217 05	5 45	5,937 45	13 87	3,363 03	420 38	....	......	14,517 53	10 42
19	6,036 35	6 31	12,350 59	29 98	1,813 55	113 35	13 00	13 00	20,213 49	14 59
20	6,442 67	5 74	48,144 65	37 41	12,549 81	306 09	900 47	90 05	68,037 60	27 65
21	7,507 99	5 07	62,107 11	40 12	7,170 72	217 29	216 70	9 42	77,002 52	24 95
22	4,504 95	5 73	30,902 12	53 37	1,414 93	157 21	844 00	140 67	37,666 00	27 29
23	3,051 40	6 02	10,960 75	33 93	3,498 45	233 23	20 50	2 56	17,531 10	20 55
24	11,742 00	5 56	88,625 03	47 70	28,132 54	396 23	1,759 25	159 93	130,258 82	32 14
ALL....	195,195 24	5 76	825,870 22	36 13	218,243 63	231 93	15,734 51	80 28	1,255,043 60	21 69

TABLE 21

ALLEGIANCE OF INJURED WORKERS, 1937

Allegiance to	Temporary Disability	Permanent Disability	Death	TOTALS
Austria	162	10	...	172
Belgium	3	...	...	3
Bulgaria	12	...	...	12
Chile	2	1	...	3
China	3	...	...	3
Czecho-Slovakia	229	6	...	235
Denmark	30	1	2	33
Esthonia	2	...	...	2
Finland	498	22	7	527
France	43	...	...	43
Germany	56	4	1	61
Great Britain	23,652	947	218	24,817
Greece	4	...	...	4
Holland	5	...	...	5
Italy	211	7	2	220
Jugo-Slavia	82	7	...	89
Latvia	1	...	...	1
Lithuania	12	...	...	12
Norway	52	2	...	54
Persia	2	...	...	2
Peru	2	...	...	2
Poland	549	15	6	570
Portugal	3	...	...	3
Roumania	52	3	...	55
Russia	479	16	5	500
Sweden	116	4	4	124
Switzerland	9	...	...	9
Turkey	4	...	...	4
United States	40	...	...	40
Not Specified	112	4	3	119
TOTALS	26,427	1,049	248	27,724

TABLE 22

SEX AND MARITAL CONDITION OF INJURED WORKERS, 1937

Sex and Marital Condition	Temporary Disability	Permanent Disability	Death	TOTALS
Males—				
Married	14,735	660	139	15,534
Single	10,702	345	70	11,117
Widowed	463	14	3	480
Not Specified	266	19	36	321
Totals	26,166	1,038	248	27,452
Females—				
Married	48	2	...	50
Single	162	8	...	170
Widowed	47	1	...	48
Not Specified	4	...	...	4
Totals	261	11	...	272
GRAND TOTALS	26,427	1,049	248	27,724

TABLE 23

WEEK OF TERMINATION OF TEMPORARY DISABILITIES, 1937

In 10,832 cases the disability terminated in 1 to 2 weeks after the accident
" 4,755 " " " " " 2 " 3 " " " "
" 2,799 " " " " " 3 " 4 " " " "
" 1,984 " " " " " 4 " 5 " " " "
" 1,330 " " " " " 5 " 6 " " " "
" 913 " " " " " 6 " 7 " " " "
" 730 " " " " " 7 " 8 " " " "
" 507 " " " " " 8 " 9 " " " "
" 387 " " " " " 9 " 10 " " " "
" 327 " " " " " 10 " 11 " " " "
" 253 " " " " " 11 " 12 " " " "
" 205 " " " " " 12 " 13 " " " "
" 170 " " " " " 13 " 14 " " " "
" 133 " " " " " 14 " 15 " " " "
" 102 " " " " " 15 " 16 " " " "
" 92 " " " " " 16 " 17 " " " "
" 61 " " " " " 17 " 18 " " " "
" 77 " " " " " 18 " 19 " " " "
" 53 " " " " " 19 " 20 " " " "
" 48 " " " " " 20 " 21 " " " "
" 49 " " " " " 21 " 22 " " " "
" 49 " " " " " 22 " 23 " " " "
" 38 " " " " " 23 " 24 " " " "
" 42 " " " " " 24 " 25 " " " "
" 39 " " " " " 25 " 26 " " " "
" 28 " " " " " 26 " 27 " " " "
" 31 " " " " " 27 " 28 " " " "
" 24 " " " " " 28 " 29 " " " "
" 21 " " " " " 29 " 30 " " " "
" 20 " " " " " 30 " 31 " " " "
" 18 " " " " " 31 " 32 " " " "
" 21 " " " " " 32 " 33 " " " "
" 17 " " " " " 33 " 34 " " " "
" 22 " " " " " 34 " 35 " " " "
" 11 " " " " " 35 " 36 " " " "
" 180 " " " " " 36 " 52 " " " "
" 59 " " " did not terminate in 52 " " " "

26,427 TOTAL CASES

TABLE 24

NATURE OF INJURIES, 1937

Temporary Disability Cases

Class	Bruises, Contusions and Abrasions	Cuts, Lacerations, and Punctures	Fractures	Crushes	Sprains, Strains, Twistings, and Wrenchings	Scalds and Burns	Eye Injuries	Herniæ	Internal Injuries	Concussions (brain, spine, etc.)	Dislocations	All Other Injuries	Industrial Diseases (Schedule 3)	TOTALS
1	988	1,377	481	186	492	26	87	65	1	6	30	31	..	3,770
2	475	695	199	109	332	35	48	42	6	3	16	40	..	2,000
3	35	190	34	17	21	3	2	3	1	..	3	3	..	312
4	102	272	59	20	40	14	12	5	1	2	8	4	..	539
5	668	860	438	119	253	84	132	56	9	11	17	34	7	2,688
6	86	117	74	34	57	13	13	7	..	2	3	5	1	412
7	56	59	46	14	23	22	5	7	..	3	3	1	..	239
8	91	136	88	46	31	76	23	15	1	1	2	1	6	517
9	113	157	87	54	31	31	16	8	..	2	5	3	7	514
10	220	565	184	109	93	75	50	14	..	2	8	29	8	1,357
11	181	311	131	47	103	72	40	21	..	4	6	14	7	937
12	94	100	72	19	86	29	9	20	..	1	5	9	1	445
13	62	58	42	8	42	3	5	2	..	..	3	4	..	229
14	28	111	22	4	17	13	..	5	1	1	1	4	..	207
15	303	502	179	50	197	88	22	24	..	2	21	27	..	1,415
16	49	154	57	20	35	17	6	3	..	..	..	10	..	351
17	97	218	54	28	39	23	12	9	..	1	3	7	..	491
18	65	215	33	15	42	43	6	5	..	1	1	2	..	428
19	80	155	43	44	54	17	7	6	..	1	2	3	..	412
20	312	322	237	91	229	24	18	15	4	5	15	15	..	1,287
21	421	421	209	107	203	72	38	24	5	3	9	36	..	1,458
22	114	193	95	27	79	30	9	9	2	3	5	13	..	579
23	98	80	57	23	38	7	7	4	..	2	6	1	..	323
24	442	537	277	108	278	82	61	26	1	7	20	17	2	1,858
Schedule 2	392	306	305	107	267	45	46	21	..	6	18	24	..	1,537
Crown.....	568	526	327	108	325	43	36	43	1	5	20	30	..	2,032
ALL......	6,140	8,637	3,830	1,514	3,407	987	710	459	33	74	230	367	39	26,427

TABLE 24—Continued

Permanent Disability Cases

Part of Body Affected	Per Cent. Impairment of Total Earning Capacity											
	0.0–9.9	10.0–19.9	20.0–29.9	30.0–39.9	40.0–49.9	50.0–59.9	60.0–69.9	70.0–79.9	80.0–89.9	90.0–99.9	100	TOTALS
Foot	39	2	3	3	..	2	..	4	..	..	..	53
Leg	24	20	15	7	4	6	4	..	..	..	..	80
Head	3	...	4	..	1	3	..	1	..	..	1	13
Face	1	...	1	..	..	..	..	..	..	..	..	2
Eye	88	69	9	2	..	..	2	..	..	..	6	176
Ear	2	...	..	..	..	1	..	..	..	..	..	3
Arm	31	19	13	3	4	7	3	5	..	..	1	86
Hand	20	23	11	6	3	..	2	..	..	..	1	66
Thumb and two fingers	...	3	1	..	..	..	..	..	..	..	..	4
Thumb and one finger	11	3	1	..	..	..	..	..	..	..	..	15
Thumb	116	3	..	..	..	..	..	..	..	..	..	119
One finger	237	2	..	..	..	..	..	..	..	..	..	239
Two fingers	77	11	1	..	..	..	..	..	..	..	..	89
Three fingers	24	4	..	..	..	..	1	..	..	..	..	29
Four Fingers	4	1	4	1	..	..	..	..	..	..	..	10
Internal organs	...	...	..	..	1	..	..	..	..	..	1	2
Industrial diseases	...	1	1	..	..	..	..	..	..	..	3	5
All other	17	4	12	4	2	8	2	..	..	..	9	58
TOTALS	694	165	76	26	15	27	14	10	..	..	22	1,049

Industrial Diseases

Description of Disease	Medical Aid Only	Temporary Disability	Permanent Disability	Death	TOTALS
Lead poisoning or its sequelae	2	31	..	..	33
Silicosis, pneumoconiosis, phthisis	2	1	5	6	14
Chrome poisoning or its sequelae	1	1	..	..	2
Arsenic poisoning	..	6	..	..	6
TOTALS	5	39	5	6	55

TABLE 25

CAUSES OF ACCIDENTS, 1937

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
A. Prime Movers:					
1. Motors, engines, fans, pumps, and automatic stokers	159	109	9	1	278
2. Shafting, couplings, collars, set-screws, and keys	15	24	3	1	43
3. Belts, lines, pulleys, chains, and sprockets	198	157	16	1	372
4. Gears, cogs, cams, and friction wheels	50	53	13	..	116
Totals	422	343	41	3	809
B. Working Machines:					
1. Brick-making machines	2	4	..	..	6
2. Glass-making machines	11	2	..	..	13
3. Pottery-making machines	2	1	..	..	3
4. Stone-working machines	5	4	..	..	9
5. Mine drills, etc	235	259	19	4	517
6. Contracting machines	168	194	7	5	374
7. Metal-working machines, n.e.s	204	88	7	..	299
8. Abrasive wheels	1,669	129	12	2	1,812
9. Drilling and reaming machines	212	53	4	..	269
10. Lathes	553	86	6	..	645
11. Milling machines	117	25	3	..	145
12. Pneumatic tools	416	81	6	..	503
13. Presses—cutting, shaping, forming	555	264	70	..	889
14. Shearing and punching machines	107	49	8	..	164
15. Wire-working machines	78	14	1	..	93
16. Welding and heat-cutting machines	297	29	1	..	327
17. Wood-working machines, n.e.s	135	97	9	..	241
18. Planers, jointers, and edgers	96	86	26	..	208
19. Saws	371	386	82	2	841
20. Shapers, moulders, and headers	41	21	6	..	68
21. Pulp and paper-making machines, n.e.s	15	3	..	..	18
22. Barkers	27	6	1	..	34
23. In-running rolls	46	45	4	1	96
24. Paper-products and printing machines, n.e.s	50	27	4	..	81
25. Cutting machines	21	15	..	..	36
26. Presses—printing and embossing	113	72	10	..	195
27. Stayers	22	26	2	..	50
28. Tanning machines	11	12	1	..	24
29. Leather-working machines	34	45	..	..	79
30. Rubber-working machines	47	48	9	1	105
31. Textile machines, n.e.s	42	43	3	..	88
32. Carders	26	21	2	..	49
33. Pickers	7	11	1	..	19
34. Sewers	283	91	..	..	374
35. Finishers and launderers	25	20	1	..	46
36. Knitters	40	27	1	..	68
37. Cutters	36	29	1	..	66
38. Weavers	66	39	1	..	106
39. Spinners	8	6	..	..	14
40. Food-products, laboratory, and tobacco machines, n.e.s	73	43	8	..	124
41. Baking machines	24	20	4	..	48
42. Bottling machines	48	16	..	..	64
43. Office machines	6	8	..	..	14
Totals	6,344	2,545	320	15	9,224

TABLE 25—Continued

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
C. Hoisting Apparatus:					
1. Elevators	35	50	3	2	90
2. Cranes	112	95	9	1	217
3. Conveyors	130	85	5	2	222
4. Mine cages	40	45	1	10	96
5. Other hoisting apparatus	209	277	18	4	508
Totals	526	552	36	19	1,133
D. Dangerous Substances:					
1. Steam escapes	80	64	2	1	147
2. Explosives	41	107	21	16	185
3. Electric currents	56	43	4	10	113
4. Conflagrations	1	1	..	2	4
5. Hot and inflammable substances and flames	662	624	10	4	1,300
6. Corrosive substances	289	165	6	..	460
7. Poisonous and deleterious substances	65	146	5	6	222
Totals	1,194	1,150	48	39	2,431
E. Stepping On or Striking Against Objects:					
1. Stepping on objects	518	271	..	1	790
2. Striking against objects	3,417	1,327	27	2	4,773
Totals	3,935	1,598	27	3	5,563
F. Falling Objects:					
1. From collapse of structure	7	4	..	..	11
2. From elevations	476	339	7	7	829
3. In mines and quarries	355	568	23	11	957
4. Other	219	660	28	13	920
Totals	1,057	1,571	58	31	2,717
G. Handling Objects:					
1. Heavy objects—loading, carrying, rolling, or piling	7,216	6,535	105	11	13,867
2. Sharp objects	780	268	1	..	1,049
3. Hand trucks, carts, and wheel-barrows	415	394	4	1	814
Totals	8,411	7,197	110	12	15,730
H. Tools	3,417	3,350	98	2	6,867
I. Runaways and Animals:					
1. Runaways	9	28	..	..	37
2. Animals	127	177	1	1	306
Totals	136	205	1	1	343

TABLE 25—Continued

Cause	Medical Aid Only	Temp. Dis.	Perm. Dis.	Death	TOTALS
J. Moving Trains, Vehicles, Etc.:					
1. Train wrecks	7	34	2	6	49
2. Caught in switch or hit fixed objects	3	18	1	1	23
3. Struck by or caught between cars and engines	5	43	6	13	67
4. Other causes, cars and engines	7	100	11	2	120
5. Mine and quarry cars	110	204	13	3	330
6. Automobiles and other power vehicles	676	768	32	19	1,495
7. Animal-drawn vehicles	56	208	5	2	271
8. All other vehicles, including boats	24	87	5	..	116
Totals	888	1,462	75	46	2,471
K. Falls of Persons:					
1. From elevations	200	474	32	10	716
2. From ladders	152	354	25	3	534
3. Into excavations, pits, and shafts	53	118	7	3	181
4. On level	1,928	3,441	39	7	5,415
5. Into elevator shafts	2	3	..	..	5
6. From vehicles	155	417	6	2	580
7. From collapse of support	74	199	12	4	289
8. On steps or stairways	178	293	3	..	474
9. From tool slipping	47	64	2	..	113
Totals	2,789	5,363	126	29	8,307
L. Flying Fragments:	4,768	665	91	3	5,527
M. All Other Causes:					
1. Doors, gates, windows, and covers	309	221	8	..	538
2. Inhalation of gases, fumes, etc.	42	38	1	5	86
3. Immersion in water and drenchings	...	...	..	33	33
4. Exposure to elements	19	65	3	3	90
5. Violence	28	35	1	3	67
6. Cave-ins	9	54	4	1	68
7. Not elsewhere specified	24	13	1	..	38
Totals	431	426	18	45	920
GRAND TOTALS	34,318	26,427	1,049	248	62,042

TABLE 26

DEATH CASES, 1937

Number of Cases

Pension Awards–	134
Lump Sums	38
Burial Expenses and Medical Aid only	60
Burial Expenses only	16
TOTAL	248

Number, Relationship, and Residence of Dependants

Relationship of Dependants	Resident in Ontario	Not Resident in Ontario	TOTALS
Widow	123	9	132
Child	179	13	192
Mother	22	8	30
Father	15	6	21
Other	4	..	4
TOTALS	343	36	379

APPENDIX

SUMMARY OF COMPENSATION AND MEDICAL AID AWARDED

From Commencement of Act to End of 1938

Compensation Awarded

Schedule 1 Industries	$83,797,653	49
Schedule 2 (including Crown Cases)	25,775,500	83
Total Compensation	$109,573,154	32

Medical Aid Paid

Schedule 1 Industries	$19,227,993	67
Schedule 2 (including Crown Cases)—Furnished by Employer		
Total Benefits Awarded by Board	$128,801,147	99

SUMMARY OF ACCIDENTS REPORTED

From Commencement of Act to End of 1938

Total Number of Accidents Reported	1,313,157

FINANCIAL STATEMENT FOR SCHEDULE 1 INDUSTRIES

From Commencement of Act to End of 1938

Income and Credits		
Net Assessments received	$109,939,894	00
Received under Section 8	164,570	61
Received under Section 84 (4)	52,009	45
Received under Section 90 (5)	456	44
Received under Section 107	158,405	48
Received under Section 114	6,255	92
Received from D.P. & N.H.	238,098	42
Interest received	2,867,491	74
Credited from Disaster Reserve	376,266	07
Credited from Pension Fund.	1,027,214	62
Received for accidents to blind workmen	907	19
Received from A.C.R.	51,842	89
Assessments estimated to be due on adjustment of 1938 pay rolls	360,850	00
	$115,244,262	83

Expenditure and Charges		
Compensation paid other than pensions, compensation deferred, and under Secs. 22 and 36	$44,310,770	97
Pensions awarded	37,070,909	22
Deferred Compensation awarded	859,449	78
Paid under Section 22	996	40
Paid under former Section 36.	41	75
Paid under Section 8	12,537	99
Medical Aid paid	19,081,746	89
Administration Expenses paid	4,773,619	76
Paid to Safety Associations	2,468,100	71
Rehabilitation paid	63,090	33
Transferred to Disaster Reserve	353,259	80
Compensation estimated outstanding for 1938 accidents	2,031,896	42
Medical Aid estimated outstanding for 1938 accidents.	292,853	17
Estimated to complete prior years' accidents	1,141,972	71
Paid under Mine Rescue Work	159,233	35
Paid for Occupational Therapy	2,066	03
Balance at Credit of Classes (Table 1)	2,621,717	55
	$115,244,262	83

SUMMARY OF PENSION FUND, SCHEDULE 1

From Commencement of Act to End of 1938

Pension awards	$36,936,284 96
Amount transferred from Disaster Reserve	134,624 26
Amount transferred from Silicosis Account	803,878 55
Interest added	15,430,581 35
	$53,305,369 12
Pension payments	28,630,775 22
	$24,674,593 90
Amount transferred to Current Fund	1,027,214 62
Balance December 31, 1938	$23,647,379 28

SUMMARY OF COMPENSATION DEFERRED, SCHEDULE 1

From Commencement of Act to End of 1938

Compensation Deferred	$859,864 78
Interest added	103,346 44
	$963,211 22
Paid on Compensation Deferred, Principal and Interest	918,795 88
Balance December 31, 1938	$44,415 34

SUMMARY OF DISASTER RESERVE, SCHEDULE 1

From Commencement of Act to End of 1938

Amount set aside	$353,259 80
Interest added	240,894 00
	$594,153 80
Transferred to classes	376,266 07
Balance December 31, 1938	$217,887 73

SUMMARY OF RESERVE FOR DEPRECIATION OF SECURITIES

From Commencement of Act to End of 1938

Profit on sale of Investments	$678,920 66
Interest	617,402 14
	$1,296,322 80
Transferred to Investment Account	356,048 72
Balance December 31, 1938	$940,274 08

SUMMARY OF SILICOSIS ACCOUNT, SCHEDULE 1

From Commencement of Act to End of 1938

Assessments Collected		$4,387,551 76
Interest added		100,911 88
		$4,488,463 64
Payments made:		
Compensation	$1,492,077 99	
Medical Aid	146,246 78	
Salaries and Expenses	483,144 15	
Handling Claims and Supervision	110,642 93	
Salaries and Expenses of Referee Board	36,067 93	
		2,268,179 78
Balance December 31, 1938		$2,220,283 86

SUMMARY OF INVESTMENTS, SCHEDULE 1

From Commencement of Act to End of 1938

Invested		$59,857,581 33
Less principal returned	$27,164,097 61	
Less amount written off for Depreciation	356,048 72	27,520,146 33
Book Value of Investments, December 31, 1938		$32,337,435 00

SUMMARY OF SCHEDULE 2 FUNDS

From Commencement of Act to End of 1938

Received from Employers		$20,630,654 68
Interest received		3,536,026 74
Profit on Sale of Investments		176,642 30
		$24,343,323 72
Payments made	$19,716,197 41	
Deposits returned to employers	883,112 35	20,599,309 76
Cash in Bank and Invested, December 31, 1938		$3,744,013 96

SUMMARY OF INVESTMENTS, SCHEDULE 2

From Commencement of Act to End of 1938

Invested	$5,245,617 86
Less principal returned	1,577,758 38
Book Value of Investments, December 31, 1938	$3,667,859 48

SUMMARY OF RECEIPTS AND PAYMENTS

From Commencement of Act to End of 1938

Schedule 1

Receipts

Assessments:		
Including additional assessments, added percentage, and interest for under or over estimate,	$110,930,952 05	
Less Merit Rating:		
(Charges....	$1,067,195 43	
Refunds....	2,058,253 48)	
	−991,058 05	
		$109,939,894 00
Section 8..................		164,570 61
Section 84 (4)..............		52,009 45
Section 90 (5)..............		456 44
Section 107................		158,405 48
Section 114................		6,255 92
D.P. & N.H................		238,098 42
From Province of Ontario for Blind Workmen..........		907 19
Accident Cost Refunds......		51,842 89
Silicosis....................		4,387,551 76
From Province of Ontario under Section 78, grants for administration expenses...		655,500 00
From Schedule 2 and Crown Employers for share of administration expenses.....		947,146 64
Interest from investments and bank deposits........		19,360,627 55
Principal returned from investments...............		27,164,097 61
Profit on sale of investments.		678,920 66
For special statistical services		95,026 89
Rehabilitation Clinic.......		61,838 66
Refund of Administration Expenses, result of special investigation............		782 35
		$163,963,932 52

Payments

Compensation payments, other than Pensions or Deferred Awards or under Secs. 22 or 36......................	$44,310,770 97
Pensions..................	28,630,775 22
Deferred Awards, principal and interest..............	918,795 88
Under Section 22...........	996 40
Under former Section 36.....	41 75
Under Section 8.............	12,537 99
Medical Aid................	19,081,746 89
Rehabilitation..............	63,090 33
Administration Expenses.....	6,656,647 90
Safety Associations..........	2,468,100 71
Investments................	59,857,581 33
Silicosis...................	1,353,243 30
Mine Rescue Work..........	151,898 79
Rehabilitation Clinic........	56,541 35
Occupational Therapy.......	2,425 77
Overpayment of Administration Expenses from Schedule 2 employers (refunded in 1926)...................	12
Cash in Banks, December 31, 1938.....................	398,737 82
	$163,963,932 52

Schedule 2

Receipts

From Employers for Deposits under Section 28 and for Claimants' Moneys........	$6,932,062 70
From Employers for Deposits under Section 32..........	13,698,591 98
Interest from Investments and Bank Deposits............	3,536,026 74
Principal returned from Investments................	1,577,758 38
Profit on Sale of Investments.	176,642 30
	$25,921,082 10

Payments

To Claimants out of Deposits under Section 28 and Claimants' Moneys.............	$6,201,747 35
Returned to Employers out of Deposits under Section 28..	749,913 65
Paid out of Deposits under Section 32:	
To Claimants............	13,511,366 89
Returned to Employers....	127,429 20
To Schedule 1 for Administration Expenses........	5,769 50
Rehabilitation...........	3,083 17
Investments................	5,245,617 86
Cash in Bank, December 31, 1938.....................	76,154 48
	$25,921,082 10

AUDITOR'S CERTIFICATE

23rd February, 1939.

THE WORKMEN'S COMPENSATION BOARD OF ONTARIO,
Toronto, Ont.

Dear Sirs:

I have completed a continuous audit of the books of the Board for the year ended 31st December, 1938, and have obtained all the information and explanations I have required.

In my opinion, the attached statements of Receipts and Payments, Table 6, Schedules No. 1 and No. 2, do truly and fairly set forth the cash transactions of the Board for the year ended 31st December, 1938.

Bank balances at the close of the period have been verified by direct communication with the Board's bankers.

Investments of the Board, as at 31st December, 1938, as shown by the books, have been verified by count. The amortized book value of these investments is $36,005,294.48. Debenture principal and coupons, due and unpaid, amount to $385,440.38 at the above mentioned date.

Respectfully submitted,

ALEXANDER G. CALDER,

Chartered Accountant

TABLE 6

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1938

Schedule 1

Receipts

Cash in Banks, 1st January, 1938:		
Can. Bank of Commerce.	$ 438 45	
Dominion Bank........	264,556 36	
Royal Bank of Canada..	6,272 95	$271,267 76
Net Assessments, Penalties, etc:		
Gross Assessments......	$6,108,421 89	
Under Section 8........	13,583 02	
Under Section 107......	5,045 28	
Under Section 114......	175 00	
Under Section 84 (4)....	203 29	
Under Section 88 (5)....	382 19	
From D.P. & N.H......	8,993 20	
From Province of Ontario for Blind Workmen...	137 17	
From Accident Cost Refunds..............	9,126 89	
	$6,146,067 93	
Less:		
Assessments and Penalties Refunded......	590,173 56	5,555,894 37
Silicosis............................		607,163 08
Interest:		
Investments...........	$1,375,865 39	
Exchange Premium.....	3,478 82	
Bank and Short Date Deposits............	10,410 86	1,389,755 07
Investments:		
Principal returned......	$839,208 23	
Short Date Deposits returned.............	900,000 00	
Profit on Sale of Investment Securities.......	70,333 95	1,809,542 18
From Schedule 2 and Crown Employers, for Administration Expenses, account of prior years paid out of Schedule 1 in 1937............................		51,421 25
Special Statistical Services.............		10,750 00
Rehabilitation Clinic:		
Refunds from Medical Aid.................	$11,387 15	
Refunds from Schedule 2 Employers..........	131 76	11,518 91
		$9,707,312 62

Payments

Compensation other than Pensions and Compensation Deferred....................		$1,839,751 06
Pensions....................		2,185,981 45
Deferred Compensation.......		30,565 27
Rehabilitation...............		6,355 70
Medical Aid.................		1,136,059 74
Silicosis.....................		154,704 85
Under Section 8..............		1,629 28
Mine Rescue Work...........		17,951 50
Administration Expenses......		449,765 47
Safety Associations...........		192,250 00
Rehabilitation Clinic Expenses.		10,522 34
Occupational Therapy........		2,425 77
		$6,027,962 43
Investments:		
Securities for permanent investment....	$2,780,612 37	
Short date deposits.......	500,000 00	3,280,612 37
Cash in Banks, 31st Dec., 1938:		
Canadian Bank of Commerce.	$1,626 83	
Dominion Bank	376,819 49	
Royal Bank of Canada.....	20,291 50	398,737 82
		$9,707,312 62

Schedule 2

Receipts		
Cash in Bank, 1st Jan., 1938:		
Imperial Bank		$ 94,168 75
Employers' Deposits under Section 28		201,239 94
Employers' Deposits under Section 32		760,626 73
Employers' Deposits of Claimants' Monies		730 00
Interest:		
Investments	$166,691 23	
Exchange Premiums	153 37	
Bank Deposits	538 41	
		167,383 01
Investments:		
Principal returned	$11,987 38	
Profit on sale of Investment Securities	357 58	
		12,344 96
		$1,236,493 39

Payments		
Claimants out of Deposits under Section 28		$339,321 97
Deposits returned to Employers under Section 28		3,828 41
Claimants out of Claimants' Monies		2,775 83
Paid out of Deposits under Section 32:		
Compensation	$693,781 91	
Medical Aid	50,997 05	
Rehabilitation	601 18	
		745,380 14
Deposits returned to Employers under Section 32		10,700 59
Investments		58,331 97
Cash in Bank, 31 Dec., 1938:		
Imperial Bank		76,154 48
		$1,236,493 39

Ontario Department of Agriculture

REPORT

OF THE

Ontario Veterinary College

1937

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 29, 1939

ONTARIO

TORONTO

PRINTED AND PUBLISHED BY
T. E. BOWMAN, PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1937

REPORT OF THE

Ontario Veterinary College

TO THE HONOURABLE P. M. DEWAN,
Minister of Agriculture.

Sir:—

I have the honour to present herewith the following report of the Ontario Veterinary College for the year extending from April 1st, 1937, to March 31st, 1938.

Convocation and Commencement Exercises

At the Convocation of the University of Toronto held on May 14th, 1937, the degree of Bachelor of Veterinary Science (B.V.Sc.) was conferred on thirty-four graduates by the Chancellor, The Rt. Hon. Sir William Mulock, P.C., K.C.M.G., M.A., LL.D.

The Annual Commencement Exercises were held on November 13th, 1937, in the Assembly Hall of the College.

The prizes won by students were presented by the Hon. P. M. Dewan, Minister of Agriculture. He congratulated the winners and expressed the hope that every student in attendance would be diligent and painstaking with his studies. Prof. W. J. McAndrew of University College then addressed the assembly and in the course of his remarks he spoke of the impressions he had formed as a boy in a country community and intimated that the teacher, lawyer, physician and veterinarian had done a great deal in promoting the growth and development of rural life.

Student Enrolment

The number of students in attendance has again shown a considerable increase. A total of 243 students were enrolled this session, being an increase of 25 over the previous year. The attendance has now reached the highest level since the year 1915. The present building was intended to accommodate approximately 135 students. As a result of the increased attendance the different classrooms and laboratories are greatly overcrowded. Laboratory classes have been divided up, necessitating a duplication of class work. We were obliged this year to confine our enrolment of new students. to those residing here and to refuse admittance to all outside applicants. Unless additional facilities are provided we may require to further restrict the attendance within the limit of the capacity of the building. In any event, the time would appear opportune to further advance the entrance requirements and to lengthen the course from four to five years for graduation. By so doing, the attendance could be regulated somewhat and at the same time improve the standard of qualification both for entrance and graduation as in the case of the other learned professions acquiring a university degree.

This recommendation is deserving of the earliest possible consideration and increased accommodation and added facilities should be provided to meet the needs.

The Teaching and Executive Staff

The members of the staff of the different departments are as follows:

C. D. McGilvray, M.D.V., D.V.Sc., *Principal: Contagious Diseases, Sanitary Science.*
W. J. R. Fowler, V.S., B.V.Sc.: *Anatomy and Surgery.*
H. E. Batt, V.S., B.V.Sc.: *Zoology, Histology, Meat Inspection.*
R. A. McIntosh, M.D.V., B.V.Sc.; *Diseases of Cattle, Obstetrics, Therapeutics.*
F. W. Schofield, B.V.Sc., D.V.Sc.: *Pathology, Bacteriology.*
L. Stevenson, B.V.Sc., M.S.: *Physiology.*
A. A. Kingscote, B.V.Sc., D.V.Sc.: *Parasitology, Pathology.*
J. S. Glover, B.V.Sc.: *Poultry Diseases, Milk Hygiene.*
V. R. Brown, B.V.Sc.: *Anatomy, Hygiene.*
H. R. Potter, B.V.Sc.: *Sporadic Diseases, Hygiene.*
T. L. Jones, B.V.S., M.Sc.: *Bacteriology.*
E. R. Bowness, B.V.Sc.: *Diseases of Fur Animals.*
F. J. Cote, B.V.Sc.: *Canine and Feline Diseases.*
R. Stewart Clark: *Jurisprudence.*
A. L. Shepherd: *Executive Clerk.*
Miss E. Sleeman: *Secretary, Librarian.*
Miss M. Scott: *Stenographer.*

Courses of Study and Instruction

Owing to the increased attendance, a readjustment of the laboratory classes was necessary. All of the laboratory classes had to be divided into two sections. This entailed a duplication of class work, increasing to a considerable extent the teaching load of the staff. In spite of this, the general course of instruction has been maintained along desirable lines.

A consistent effort has been made to provide a good standard of instruction throughout and to further correlate class and laboratory work in keeping with the best educational practices.

The general aim has been to diversify and improve the course so as to adequately equip the graduate to render more effectively the services which live stock owners, allied interests and the general public seek to acquire. The trend and demand for veterinary service has greatly changed within the last decade in the prevention of diseases, especially those which are liable to be disseminated through the ordinary channels of live stock traffic. As a result, greater efforts are being made to ensure the highest possible standards of animal health by the prevention and control of diseases which are infectious and communicable and likely to become more prevalent and widespread unless checked. Greater attention is also being given to create a greater interest in diseases of animals communicable to human beings, either directly or indirectly, by animal food products, but more especially through milk-borne infection and unwholesome meat food products. To meet the various exigencies of private and public service, a high standard of professional qualification is necessary, hence the training of the undergraduate becomes increasingly in need of careful guidance.

Adjustments are therefore necessary to meet changing conditions as they arise, and are being made from time to time in the course by developing the basic sciences and by broadening the subjects of instruction in relation to public service and private practice in their various branches. Owing to the prevailing trend towards research and investigational work, every encouragement is given the undergraduate to develop a greater talent and inclination in this direction. A detailed outline of the regular course of study and instruction is contained in the college calendar which is distributed to those interested. In addition to the regular undergraduate course, special classes and laboratory work in the nature of short courses are provided for graduate practitioners. By this means the practicing graduate is given the opportunity to keep abreast of the times and be of greater usefulness to those depending on his services.

Special Courses

During the month of June a conference was held in the interests of the fur farming industry, under the joint auspices of the College and the Ontario Fur Breeders' Association.

The course comprised special lectures and demonstrations on the following subjects:

The Control of Infectious and Contagious Diseases.
Profit-producing Pelts.
Breeding and Management of Mink.
Principles of Infection and Immunity.
Mineral and Vitamin Deficiency.
How to Improve the Quality of Pelts.
Breeding and Management of Foxes.
Fisher and Nutria Farming.
Nutritional Requirements.

During the month of July a short course for practicing veterinarians was held at London, Ontario, in co-operation with the Ontario Veterinary Association. The programme comprised the following topics:

How to Detect Common Parasite Eggs.
Routine Examination of Seminal Fluid.
Demonstration of Stomach Tube Technique in the Horse.
Application of Anaesthetics in the Horse.
Examination of the Udder for Mastitis.
Demonstration of the Anatomical Structure of the Udder.
Bacteriological Diagnosis of Mastitis.
Measures of Sanitation and Control in Mastitis.
Drawing of Blood for Serological Examination.
Diagnosis and Treatment of Fractures.
Intravenous Medication.
Operative Technique and Anaesthesia.

Research and Investigation

While the College is essentially an educational institution, concerned primarily with the instruction and training of students, nevertheless considerable research and investigational work is being done by the various members of the staff. The scope and extent of the work undertaken has naturally to be kept within the means at our disposal and cannot be extended beyond the available facilities. The increased student enrolment and additional amount of routine has also lessened the time that could be devoted to essential research work. However, much of the routine work is related to the laboratory examination of specimens and to the clinical diagnosis of disease and is of much value in promoting further researches which may be undertaken as opportunity permits. As in former years, we have endeavoured to avoid duplication of work or the repetition of experiments except where necessary to establish pertinent facts of value. We are again indebted to many practicing veterinarians and owners of animals for their hearty co-operation and assistance from time to time. Some of the diseases receiving attention are briefly summarized herewith and detailed reports are submitted as appendices.

Actinomycosis in the Horse: This is undoubtedly an unusual disease in the horse. While very common among cattle, the infection in the horse has not previously been observed at the College clinic.

Botryomycosis in the Horse: This disease in many ways resembles Actinomycosis. It is a fairly common infection in the horse and usually difficult to treat successfully. In this case it is interesting to note that satisfactory results followed the use of an autogenous bacterin.

Influenza Among Horses: Some interesting data were collected and recorded from two extensive outbreaks of Influenza occurring in many horses. The outbreaks were attributed to stallions which were apparently carriers of the virus and disseminated the infection to mares at service.

Heaves or Pulmonary Emphysema in Horses: This disease, which is commonly known as "broken wind," has been investigated to determine whether, like "Asthma" of man, it may be due to the influence of some foreign protein or pollen. The results obtained did not indicate that there was a similar etiology.

Tuberculosis and Laennec's Disease in Dogs: These two diseases are unusual in dogs and are reported as interesting cases. Tuberculosis in the dog does not occur as frequently on this continent as in Europe.

Johne's Disease in Cattle: Several cases of this disease were again observed this year. A report is submitted describing the disease in detail as to its nature, occurrence and methods of diagnosis.

The Examination of Seminal Fluid: This article, while of a highly technical nature, is submitted as an appendix. It reviews the different methods employed in the collection and examination of seminal fluid.

Poultry Diseases: During the year a number of interesting cases were observed, such as poisoning in pea fowl, ruptured livers in chicken, capillaria infestations, nutritional diseases and infectious tracheitis in chicks. A report of the latter is submitted as an appendix.

Tuberculin Test in Mink: The occurrence of tuberculosis on a mink ranch was investigated. The infection was found to be of the bovine strain. The animals were inoculated with tuberculin and positive reactions obtained to the test were verified on post-mortem examination.

Foot and Tail Rot in Mink: Many losses were reported as occurring on mink ranches. Several animals affected with this condition were obtained. It was considered that this condition was of dietary origin. In these particular cases recovery was rapid when the nutritional balance was obtained.

Big Head in Foxes: Animals affected with this condition were examined and it was concluded that the disease was not primarily of an infectious nature but was due to faulty methods of housing, lack of sunshine and vitamin D deficiency.

Hysteria in Foxes: This condition has become very common in fox ranches where the custom has been to remove foxes from sheds and small enclosures to a large enclosure or run for the last few months before pelting. From a few hours to ten days after placing these animals in the runs a variable percentage develop convulsions and are killed by their mates. In the past, a number of explanations have been offered, the most common one being that these animals eat poisonous plants that abound in these runs. Post-mortem findings, and filtrates made from stomach contents of these animals and injected into laboratory animals, failed to substantiate this theory.

It seems that over-exertion and nervousness are the main causes. These animals are raised in small pens or sheds; their exercise is curtailed by the smallness of the pens; they are not allowed on the ground nor out in the open. When moved to a large run, in company with other animals, they become panicky and run themselves into a state of physical and nervous exhaustion. Convulsions result and the others attack and kill them.

If animals must be placed in large runs, then it is wise to move them to the breeding pens for a week before giving them this greater freedom. Sedatives, such as phenobarbital in doses prescribed for dogs and administered by the use of stomach tube or subcutaneous injection, are the recommended methods of treatment for affected cases.

Differentiation of Streptococci from Various Sources: Streptococci have been isolated from different conditions occurring in a variety of animal species. These include Joint-Ill in the foal, Strangles in the horse, Bovine Mastitis, Pneumonia in the fox, and Septicaemia and Empyaemia in dogs. As time has permitted, a number of tests have been made on these cultures to determine what differential features may exist among organisms isolated from different sources. These records may provide interesting data when an adequate number of cultures have been tested for conclusions to be drawn from them.

Anaemia in Young Pigs: It is a serious matter that there is no apparent decrease in the number of fatalities among winter litters from this disease. The prevention of anaemia is such a simple procedure that there is no excuse for this loss to continue. Our most recent experiments have been directed towards establishing a method of prevention which requires the minimum of work for the swine husbandman. It was found that week-old pigs given 0.3 grams of iron maintained the level of haemoglobin above the danger zone. Thus, one dose of iron was sufficient to prevent anaemia from occurring.

Germ Infections in Swine: From these cases brought to this laboratory for diagnosis we find that fatalities in weaned pigs occur most frequently within two weeks after weaning. Pneumonia is the commonest lesion; gastritis and enteritis are often present. From the majority of carcasses which are received in a fresh state, *Pasteurella suiseptica* is isolated. A few cases of acute gastro-enteritis have been observed without any respiratory lesions. When cultured aerobically, no significant organisms were obtained. An anerobic organism has been isolated but attempts have not been made to reproduce the condition with such a culture.

Extension Service

This service has been promoted to furnish specialized clinical and laboratory assistance in the diagnosis, prevention and operative treatment of diseases in all classes of animals. It has been developed along such lines of usefulness as seemed to be most effective and desirable to those requiring specialized services and to furnish clinical and laboratory material for teaching and demonstration purposes in class work. It thus serves a twofold purpose and has also been made more or less self-sustaining by making a nominal charge to cover any expense incurred where the service rendered is of an individual commercial nature. The nature and extent of the service rendered is briefly summarized as follows:

Animal Clinics: These clinics are held regularly each afternoon throughout the College session. All animals admitted are carefully examined, after which medical treatment is prescribed and surgical operations performed as may appear desirable. The value and importance of the service rendered is manifested by the large number of animals presented regularly for clinical observation and operative treatment. The cases presented were quite varied in character and all species of animals are included, comprising over 200 horses, 150 cattle, 100 swine, 75 sheep, and 100 dogs and cats. Details of the service rendered are contained in a separate report of the clinical department which is submitted as an appendix. In this report, attention is drawn to the need of additional help and for an addition to the building to provide space for post-mortem purposes.

Examination of Parasites: Numerous specimens received have been examined and identified. Such material has included various species of flukes, tapeworms, roundworms, insects and protozoans from a variety of animals. Recommendations regarding the biological control and treatment of the infested animals have been made. Parasitic diseases diagnosed during the year include mange and strongylidosis in horses; mange and coccidiosis in cattle; trichostrongylosis and nodular disease in sheep; mange, ascariasis, lungworm infestation and sarcosporidiosis in swine; and in the small animals most of the forms of parasitism to which they are commonly susceptible. Nearly two thousand specimens collected by students were examined. Data are still being collected on the geographical distribution of the flesh fly, *Wohlfahrtia vigil*. This parasite has caused havoc in several new areas in southern parts of the province and has been recorded from new centres of the West, but not beyond the Rocky Mountains. All case reports during the past year have concerned mink and young carnivorous animals. Mink ranchers have installed several hundred of the fly-proof nest boxes described in our annual report of 1935, and have thus avoided a repetition of the heavy losses encountered in 1934. Articles describing the construction of these fly-proof dens have appeared also in German and other foreign journals.

Specimens of a parasite hitherto unrecorded in these latitudes of North America were received on two occasions for identification. They were identified as oviduct flukes, *Prosthogonimus pellucidus*. In Europe and in other parts of America they are considered to be the most pathogenic flukes of poultry resulting in acute inflammation of the oviduct, the formation of soft shelled or broken eggs and peritonitis which may prove fatal. The flukes are large, nearly half an inch in length and a quarter of an inch in width, and reddish-yellow in colour.

Fecal Examinations: Samples of fecal material from various domestic animals have been subjected to routine examination. The majority of these tests were made to confirm or eliminate the presence of internal parasites by the discovery or absence of their eggs and larvae.

Examination of Blood: Blood samples received have been examined for the number and type of cells, for evidence of anaemia, reduced haemoglobin and animal parasites.

Examination of Skin Scrapings: Skin scrapings have been examined for evidence of the causative organisms of mange and ringworm. In the former case, outbreaks of mange, coming under the Animal Contagious Diseases Act, have been reported to the Health of Animals Branch. In other cases, control and treatment has been recommended directly to those concerned.

Examination of Seminal Fluid: Samples of seminal fluid from horses, cattle and dogs have been examined by routine methods, for evidence of sterility or genital infections. The owners of such animals have been given advice as each individual case merited.

Examination of Meat: Carcasses of various food animals have been inspected and opinions given regarding their fitness for human consumption. Carcasses have been condemned where tubercular lesions, cancerous growths, pyaemia and sarcosporidia were present.

Examination of Butter: Several samples of butter were examined during the year. These samples contained numerous fly maggots, which had made a considerable quantity of butter unsuitable for marketing. The maggots were identified and methods of preventing a recurrence of the troubles recommended.

Biological Laboratory Service

Preparation of Biological Products: One hundred and eighteen thousand seven hundred test doses of *S. pullorum* antigen and positive and negative control sera were prepared and supplied to registered veterinarians for the agglutination test for *S. pullorum* infection. Eleven thousand six hundred and thirty test doses of *Br. abortus* antigen were distributed to qualified veterinarians for the agglutination test for Infectious Abortion of cattle (Bang's disease).

Serological Tests: These are commonly known as blood tests and are widely used for the diagnosis of Infectious Abortion in cattle (Bang's disease). During the year, 21,185 blood samples were submitted to the agglutination test for Bang's disease. Included in this number were 2.866 blood samples from cattle intended for export or for exhibition purposes.

The results of these tests are as indicated in the following table:

Blood Serum Tests For Bang's Disease

Number of samples tested	21,185
Number positive	2,655
Number doubtful	801
Number negative	17,557
Unfit for testing	172

Poultry Laboratory Service

Routine Examination of Specimens: This laboratory service is increasing enormously and has been largely responsible for the increased amount of routine work. During the year, specimens were received for laboratory examination as indicated in the following tables:

Poultry Diseases	No. of Cases
Adult pullorum infection	113
Ascites	16
Avian Diphtheria	10
Coccidiosis	207
Colds and Roup	15
Enterohepatitis (turkeys)	19
Enterohepatitis (chicken)	14
Fowl Cholera	60
Laryngo-tracheitis	23
Leucosis	54
Pullorum Disease of Chicks	493
Tuberculosis	36
Cloacitis	1
Other Infections	34
Volvulus and Impaction	3
Egg Bound	3
Internal Laying	8
Enteritis	28
Ruptured Oviduct	3
Impaction of Gizzard	1
Injuries	9
Nutritional Disorders	357
Prolapse	12
Poisoning	3
Ruptured Liver	16
Tumours	37
Worms (ascardia)	105
(capillaria)	28
(large tape)	58
(minute tape)	43
(round and tape)	54
No evidence of Disease, or Putrid	74
Total	1,937

General Laboratory Service

Examination of Pathological Tissues: Tissues collected at autopsies or during the course of operations have been sectioned and prepared for microscopic examination. This work, necessary to complete post-mortem records, consumes a great part of time devoted to laboratory diagnosis. Such material is not only collected at numerous autopsies performed at the College but also is received from various points throughout the province. Tuberculosis, lump jaw and cancerous growths form a large part of the disease lesions examined by this method.

During the year, specimens were received for laboratory examinations as indicated in the following tables:

Pathological Examinations

NATURE OF CASE	Butter, Water tests	Cattle	Sheep	Horses	Swine	Dogs	Cats	Rabbits	Birds	Foxes	Goats	Mink	Other Animals	Total
Tuberculosis	.....	5	.....	..	...	1	....	.....	....	.....	....	7	....	13
Neoplasms	.....	7	.....	15	1	37	3	.....	1	...	.....	.....	1	65
Parasites	.....	11	10	9	1	27	1	3	12	71	3	48	18	214
Enteritis	....	4	3	.....	6	1	1	.....	.....	.....	....	.....	....	15
Gastritis	.....	1	.....	.....	4	4	.....	.....	.....	5	.....	.....	2	16
Pneumonia	.....	7	2	1	10	1	.....	.....	1	8	.....	14	.....	44
Nephritis	....	2	....	.....	.....	3	1	.....	.....	.....	.....	2	.....	8
Hemorrhagic Septicemia	.....	4	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	20
Food Poisoning	.....	3	.....	7	.....	.....	.....	.....	.....	4	.....	25	....	39
Nutritional Diseases	.....	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	22	3	35
Anemia	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Pericarditis	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2
Mastitis	.....	4	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	5
Hepatitis	.....	2	1	.....	4	4	1	.....	.....	2	.....	2	.....	16
Actinomycosis	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Red Water	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Swamp Fever	.....	.....	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Abscess	.....	5	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	8
Examination of Pus	....	2	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	4
Blood Tests	.....	1	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Urine Tests	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Semen Tests	.....	2	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	6
Tissue from Operations	.....	4	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Joint Ill	.....	3	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Meat Inspection	.....	5	.....	.....	7	.....	.....	.....	.....	12	.....	9	.....	33
Butter, Milk, Cream Tests	136	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	136
Well Water Tests	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Miscellaneous	.....	14	5	4	7	.....	.....	1	.....	2	4	4	4	45
TOTAL	148	96	29	73	50	83	7	4	14	114	7	133	28	786

Publications: During the year the following bulletins have been published relating to diseases deserving of special consideration at the present time:

Swine Diseases and Their Prevention.
Navel-Ill in Foals.
Mastitis or Garget in Cows.
Bang's Disease (Infectious Abortion).
Diseases of Poultry.

Throughout the year the entire staff has been kept fully occupied and have performed their duties in a painstaking and diligent manner.

All of which is respectfully submitted.

C. D. McGILVRAY,
Principal.

Guelph, Ontario,
March 31st, 1938.

A CASE OF ACTINOMYCOSIS IN THE HORSE

By Frank W. Schofield, D.V.Sc.

True actinomycosis is a rare infection in the horse, and reports of such cases are scarce in veterinary literature.

History: The subject was a young Clyde mare which some months previous to her appearance at the clinic had suffered from a severe case of strangles. An abscess had formed in the sub-maxillary lymph glands, which had been lanced. A short time after the wound healed, a swelling formed at the place of incision. This slowly increased in size till the intermaxillary space was filled with a mass believed by the owner to be a tumour. Palpation revealed the mass to be definitely lobulated.

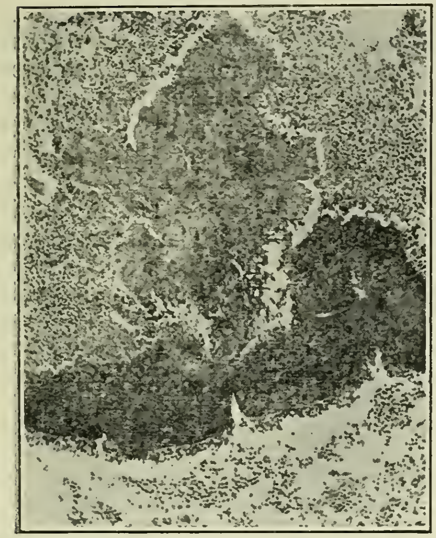
Gross pathology: The mass was removed by blunt dissection and when incised it was found to be composed of a group of greatly enlarged lymphatic glands. The glands were firm, and contained numerous small foci of suppuration. The lesions simulated those of bovine actinomycosis, in that the areas of infection bulged slightly above the surface of the surrounding tissue.

Examination of the pus: Direct examination of the pus under a cover slip showed the presence of a few actinomycotic-like colonies. These, under the high power were found to be composed of masses of mycelial threads at the centre, with numerous mycelia spreading outward into the surrounding cellular exudate. Well formed clubs were not seen.

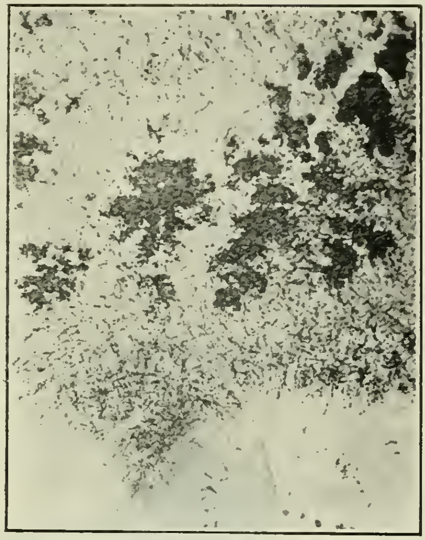
Histopathology: Sections stained in haematoxylin and eosin showed typical actinomycotic-like colonies immediately surrounded by large numbers of neutrophils. Much fibrous tissue was present and a variety of histocytes. Sections of tissue stained by the gram method showed the colonies to be composed of masses of mycelia. Club formations were present, but were not a marked characteristic.

It is interesting to note that the organism is definitely an actinomycete in morphology, having the appearance of *A. bovis*, but in this case affecting the soft rather than the bony tissues.

Bacteriological culture: A pure culture of a gram positive pleomorphic rod, with a definite tendency to form short filaments was isolated on blood agar. The organism is a slow growing aerobe. Its relationship to the disease, if any, has not been determined.



Colony showing mycelia



Photos by F. Irwin, Banting Institute.

Colony of actinomyces

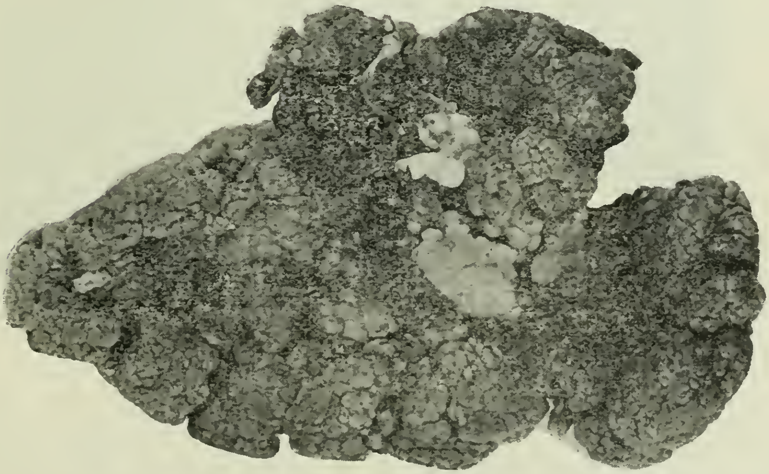


Photo by V. Brown, O.V.C.

Actinomycotic lymph glands

SUPPURATIVE DERMATITIS DUE TO BOTRYOMYCOSIS

Frank W. Schofield, D.V.Sc.

This case is reported because of the unusual type of lesion caused by the botryomyces. In the horse, botryomycosis is usually manifested by the formation of tumor-like masses of fibrous tissue containing small abscesses and fistulous tracts which discharge on the surface of the tumor. The lesions in this case were singularly free from fibrous tissue and might be described essentially as "multiple cutaneous abscessation."

History: The subject was an eight-year-old Clyde mare. The first lesion to be noticed occurred in the skin covering the right forearm. The owner thought the condition to be a bruise which had become infected. Within a week or two, a similar lesion appeared on the left forearm. Next lesions appeared on the region of the withers. The disease now began to spread rapidly, extending down over the shoulder and forward along the neck. This whole area was involved within three months after the first lesion was seen on the forearm.

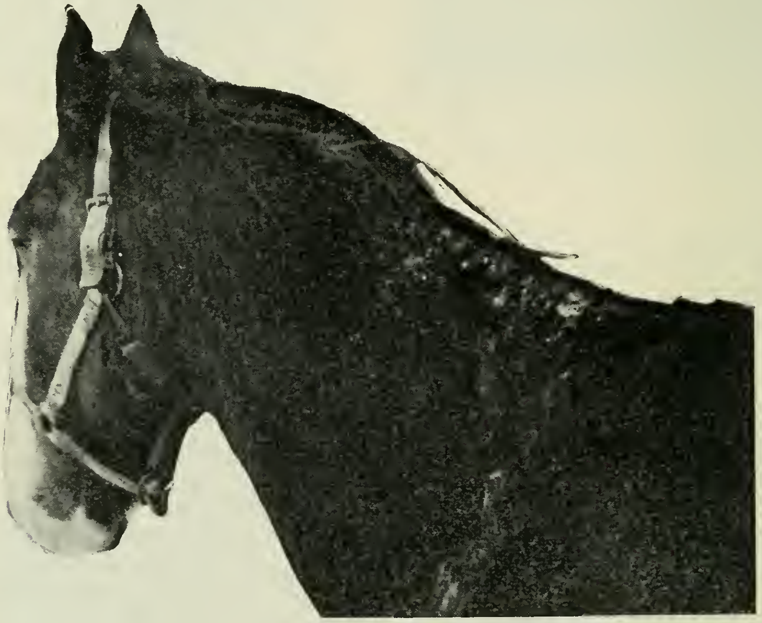


Photo by G. E. Myers.

Botryomycosis: lesions affecting the skin of the neck, withers and shoulder

The Lesion: Numerous scabs were present on the somewhat swollen skin, and among the scabs were foci of granulation tissue, each showing a suppurating centre. The latter were about the size of a hazel nut and when pressure was applied, a small quantity of mucoid pus oozed. The infection was limited to the skin, the deeper tissues being but slightly involved.

The Pus: Direct examination of the pus under a cover slip showed the presence of numerous dense granular bodies, similar to the colonies in actinomycosis, but with regular borders and a denser matrix.

Histological Sections: Within a typical granulation tissue were numerous nests or colonies of the botryomyces. Under the high power the clusters of cocci could be readily seen.

Bacteriological Culture: Both aerobic and anaerobic cultures showed mixed infection of staphylococci, streptococci and gram negative bacilli.

Bacterins are being tried in the treatment.

An autogenous bacterin was used in this case with excellent results. Within ten days, a definite improvement was observed, and within three weeks the suppurative lesions had entirely disappeared. The animal is back at work.

I am indebted to Dr. G. E. Myers, Goderich, Ontario, for the history and photographs.

A REPORT OF TWO OUTBREAKS OF EQUINE INFLUENZA DUE TO VIRUS CARRIERS (STALLIONS)

Frank W. Schofield, D.V.Sc.

Two rather unusual outbreaks of equine influenza occurred in the Province last summer, the disease occurring among a number of mares which had been bred to imported stallions. Both stallions came from the same stock-farm where there had been a severe outbreak of influenza in the Spring of the year. In one outbreak, approximately forty out of sixty mares bred by the stallion came down with typical influenza. In the other case, some sixty out of a total of eighty mares bred contracted the disease. In those cases where a mare was nursing a foal, and the latter contracted the disease, it proved to be rapidly fatal in almost every instance. The infection usually spread to all the horses on the farm. A small percentage only of the animals bred became pregnant. The incubation period was remarkably uniform, the mares coming down regularly at an interval of one week after service.

The symptoms were those of typical influenza, viz.: anexoria, accelerated pulse, elevation of temperature 105 - 106 F. with more or less depression. No cases terminated fatally and all responded to the usual medicinal and biological treatment.

The nature of the outbreaks point to one conclusion only, that the stallions were carrying the virus of the disease in some part of the reproductive organs. It is probable that other similar outbreaks occurred, but accurate data were not available.

Experiment in Transmission: Unfortunately semen from the suspected stallion could not be obtained until more than six months after the outbreak. The semen was collected and placed in an atomizer and sprayed over the face and into the nose of an aged mare. An intravenous injection was made at the same time. The mare was kept under observation for one month but no symptoms of disease developed. There can be no doubt in these cases but that the disease was spread directly from the stallions to the mares by the act of coitus, the virus being present in the testicle or some other part of the generative organs.

The data presented in the above was obtained from Dr. J. H. Thompson, Mount Brydges, and Dr. A. C. Burt, Simcoe.

IS PULMONARY EMPHYSEMA AN ATOPIC MANIFESTATION?

Frank W. Schofield, D.V.Sc.

The clinical resemblance between human asthma and equine heaves suggested to the writer the possibility of a similar etiology. The following is a brief record of the tests which were carried out in connection with the experiment.

It is a well known fact that most cases of human asthma represent an allergic type of reaction to some protein substance which enters the body either as food via the elementary tract or as particulate material by the respiratory system. Such substances with which they react in the body to produce the asthmatic attacks are known as reagins.

Sensitivity of the skin is a common phenomenon especially when the atopen is inhaled, as for example in asthma due to animal danders. Allergic skin reactions are rare when the exciting agent is a food.

Reagents Used in the Test: Two different reagents were used, viz.: (a) a protein extract of pollen containing the mixed pollens of timothy, orchard, June, redtop and sweet vernal grasses; (b) an alkaline extract made from stable dust. The latter was prepared by collecting dust from various parts of a horse stable and extracting with the following fluid:

Sodium chloride	.5%
Sodium bicarbonate	.275%
Phenol	.4%

After extraction, the fluid was centrifuged and passed through a Berkfeld filter.

Technique of the Test: The skin on the side of the neck or thorax was clipped and shaven and the reagent injected intra-dermally. In addition to this, in four of the six cases studied, a scratch test was also made. The site of inoculation was frequently observed during a period of fifteen minutes following the inoculation. In the first three cases, observations were made at fifteen-minute intervals for a period of one hour.

Result: In no case was there a reaction which could be designated as even suspicious when compared with the control inoculations.

Comment: It would appear, from a consideration of these few cases, that reagins against the pollens and dust used in these tests have not been demonstrated in the body of the horse. The conclusion that such substances are not the cause of pulmonary ephysema, and that reagins do not exist is unwarranted, as reagins may be present in the body without causing skin sensitivity.

Dr. L. Stevenson freely and frequently assisted in this work.

*This product was kindly supplied by the Lederle Company, Pearl River, New York, U. S. A.

TUBERCULOSIS IN A DOG

Frank W. Schofield, D.V.Sc.

Tuberculosis in the dog is a rare disease in North America, compared with its incidence in many European countries. In diseases of the dog accompanied by marked cachexia, the possibility of tuberculosis must always be considered.

Subject: Great Dane, male, aged seven years.

Symptoms: The first symptom, or lesion, was an abrasion on the lateral surface of the right hock, accompanied by moderate swelling. The lesion failed to heal, except for a slight granulation around its margin; and from its occurrence to the time of death of the patient, the swelling as well as a serous discharge persisted.

After about one year, a similar abrasion was observed on the opposite hock, not quite as large as the first; and although it possibly had no relationship to either the first lesion or the outcome of the disease, I am presenting my observations as seen.

Shortly afterwards, several nodules, about the size of a hazel nut, appeared, three on the abdomen and two in the left axillary region; about this time the patient was noticed to be falling off in condition, with occasional vomition, inertia, and lack of tone in the skin. From now on the disease progressed rapidly, and the animal was destroyed with strychnine intravenously.

Post-mortem: The following are the outstanding changes observed:

Mesentery: covered with a great many tiny miliary nodules. *Liver*: many small areas of necrosis were scattered throughout the parenchyma; there were also several large areas of necrosis about the size of a fifty-cent piece. *Kidney*: this showed similar large and small areas of necrosis chiefly in the cortex. *Intestine*: two large tumor-like masses, about two inches in diameter, were found attached to the small intestine, at about the same location, but on opposite sides. Their growth had caused a partial occulsion of the bowel, which in my opinion resulted in the rapidly developing emaciation which preceded the destruction of the patient. The lungs and heart were free of any gross changes.

The lesions were white in colour, soft in consistency and suggested malignancy.

Histopathology: The lesions were quite constant in their microscopical appearance. Fibrous tissue was present in abundance, even in the youngest lesions, forming a well marked capsule. At the centre there was usually an area of necrosis. Around the area a sprinkling of endothelial cells might be seen. Giant cells were not present. There was no evidence of calcification. Some round cell infiltration was present in the lesions of the kidney only.

I am indebted to Mr. R. C. Schofield for the history of the case as well as the post-mortem findings.

MULTIPLE NODULAR HYPERPLASIA OF THE LIVER

(Laennec's Disease)

FRANK W. SCHOFIELD, D.V.Sc.

The subject was a Spaniel bitch, aged about four years. For at least a year there had been indigestion with frequent vomiting, but the appetite had remained good most of the time. The dog began to lose weight and icterus appeared. The abdominal cavity slowly became distended with fluid, which caused considerable pain. An unfavourable prognosis was given and the animal was destroyed.

Post-mortem Findings: The abdominal cavity was filled with fluid. The liver was normal in size but pale in colour and composed of an enormous number

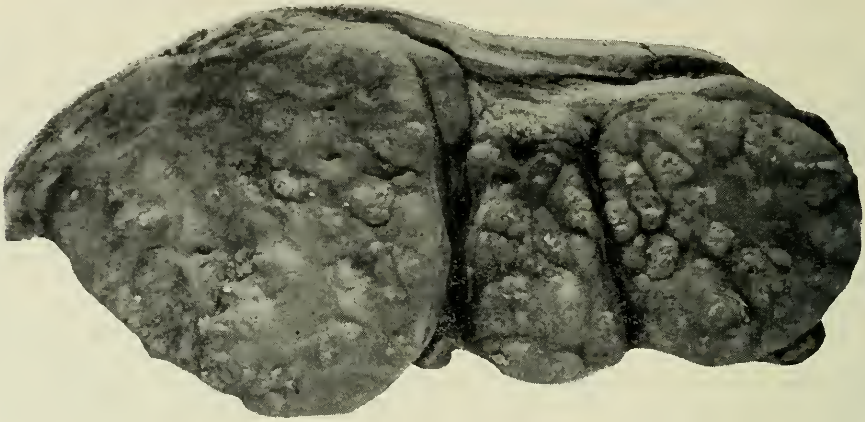


Photo by V. Brown.

Multiple lobular hyperplasia (Dog)

of small nodules, giving the liver a very characteristic verrucous appearance. The texture was firm, indicating the presence of fibrous tissue between the nodules. Other organs and tissues appeared normal.

Histopathology: The normal architecture of the liver lobule had entirely disappeared. The nodules were formed of irregular groups of hepatic cells. The cells varied greatly in size and contained a pale granular cytoplasm. Fibrous tissue was liberally distributed between the nodules.

I am indebted to Dr. C. Leroy McGilvray for the history of this case. Laennec's Disease is not infrequent among dogs, but rarely seen in other domesticated animals.

INFECTIOUS TRACHEITIS IN CHICKS

J. S. Glover, B.V.Sc.

A condition known as chick bronchitis or infectious tracheitis has frequently been reported on this continent. However, it was apparently not recognized here, if present, until 1936, and its occurrence coincided with the importation of chicks from sections where the disease was known to exist. Only a few outbreaks were brought to our notice that year, and none were encountered by us last year. This spring we have had occasion to investigate an extensive outbreak in chicks ranging in age from a few days to five weeks.

The cause of the disease is a filterable virus, and the incubation period is less than twenty-four hours. In the outbreak referred to above, no symptoms of the disease were noticed in any of the birds until March 3rd, and by March 5th about twenty thousand were affected.

The disease is apparently more often observed in spring chicks than in winter chicks, and the mortality is greater in very young chicks than in older ones.

The duration of the disease is about seven days. The mortality in some outbreaks is not high, and the recovered birds are immune to further attacks. There is no evidence to show that they act as carriers. The only symptom exhibited is a gasping for breath, and post-mortem lesions are usually absent although cheesy material is sometimes found in the bronchi. As a rule, if the disease is recognized early, treatment is successful. This consists of supplying the chicks with the best of food, increasing the amount of cod liver oil in the rations, and spraying the houses with a eucalyptus oil spray. (A dust spray is fatal in respiratory conditions in poultry.)

In the outbreak encountered this year, prompt remedial measures were advised and put into effect, and within a very short time the condition in the flock cleared up with very few deaths.

REPORT OF THE CLINICAL DEPARTMENT

R. A. McIntosh, M.D.V., B.V.Sc.

This department is concerned with the practical application of veterinary medicine and surgery. This is done chiefly for the purpose of instructing students in therapeutic and surgical procedure. It has, however, other values, for it is a form of extension service which enables treatment of different cases which local practitioners may find inconvenient to handle. It also has value in the fact that many animals are restored to health, usefulness and increased value as a result of the service. An examination of the clinic records of the past decade reveals a steady increase in the numbers of the cases submitted to the clinic. Clinical material comes from many parts of the Province, being brought in at the suggestion of veterinarians and others. In addition to those brought in from a distance, the Agricultural College live stock and other animals in the immediate vicinity of Guelph are frequently presented for clinical observation and treatment.

The nature of these cases is quite varied and all species of domesticated animals are submitted. This is revealed in the following data taken from the 1937-1938 records of the Clinical Department.

In the past year, upwards of 200 horses were submitted to the clinic. Surgical cases were preponderant but there were also a number of medical cases and in a few instances cases of an infectious nature representing ailments affecting a number of animals in the same quarters. There were 150 cattle submitted and in this species sterility cases and breeding abnormalities were most numerous. There were also a number of herd conditions such as abortion, mammitis, sterility, mange and hemorrhagic septicemia under surveillance. Representative cases, from affected herds, of calf scours, calf pneumonia, Johne's disease, actinomycosis, and tuberculosis, were brought in for diagnosis and used for demonstration purposes.

Upwards of 100 swine were submitted for examination. In reference to the swine clinics, there were a considerable number of surgical cases such as hernias, cryptorchidism and other congenital aberrations. These provide interesting and useful clinics because surgical treatment of these abnormalities is attended with good results in most instances and can be clearly demonstrated. Many of the swine cases, however, are disease conditions representative of some affection of a litter or a herd of pigs and because the history of these outbreaks, the clinical aspect of the case, the post-mortem examination (in some instances), and the subsequent bacteriological findings can be followed through, they make exceptionally useful clinics. The diseases most commonly observed are anemia of suckling pigs, gastro-enteritis, pneumonia affections, parasitism and nutritional disturbances. Such infections as those responsible for hemorrhagic septicemia, swine erysipelas, necrotic enteritis and general sepsis are frequently isolated.

The sheep clinics are not so numerous as those of swine, but here again certain cases are brought in as examples of flock conditions and include such diseases as parasitism, pregnancy disease, hemorrhagic septicemia, lambing troubles and nutritional imbalances.

The small animal clinic is well patronized—dogs, cats and other pets being submitted for examination and treatment. Many of the cases are surgical in character, but there are a considerable number of patients suffering from the various ailments peculiar to the canine and feline species. Mange, distemper, chorea, gastritis, eczema, fractures and dietary errors being illustrative of the most common disease conditions encountered.

The greater part of the foregoing activities of this department are accomplished during the instructional period of the College. In the interim, the work is confined to occasional examinations of exceptional cases, to extension service in the form of investigations of outbreaks of disease and assistance to practitioners in a consultation capacity.

In connection with the extension service of this department in the past year, a bulletin on the Prevention of Diseases in Swine and a pamphlet on the Prevention of Navel-Ill in Foals were prepared and published. Another phase of the extension work in this department which is growing, and at times becoming cumbersome, is the post-mortem examination of animals, particularly pigs, which have died. Generally, they are cases representative of some condition of which a number of animals have died or are affected with. This work has great value both to those for whom the service is rendered and to the students because of its educational value. Because the clinical department and the operating laboratory are the ports of entry through which all of these post-mortem specimens find their way into the College, they constitute an ever-increasing source of extra work. In addition, they give rise to many interruptions in routine teaching. It is not desirable to have these cases handled in the operating room of the institution, neither is it fair that they should be delegated to the clinical department. At least, if this procedure is to continue, a suitable post-mortem room should be provided and additional help obtained to enable this department to get the information from these people who come in at any and all times, and to also advise them regarding their animals. This extra help is also needed to take care of clinical cases coming in and also some of the Ontario Agricultural College work which at the present time is being neglected or else taken care of by themselves.

Accordingly I am taking the liberty of including with this report a recommendation that space be provided for post-mortem work and that extra help be obtained to take care of those features mentioned.

JOHNE'S DISEASE IN CATTLE

R. A. McIntosh, M.D.V., B.V.Sc.

In the 1933 report of the Veterinary College reference was made to this disease. Since that occasion a considerable number of cases of the disease have been submitted to the clinic for diagnosis. Because its prevalence is apparently increasing, it is felt further allusion to the condition would be timely. Formerly cases of this nature were more frequently observed in the Jersey and Guernsey breeds, but the last three cases encountered in the clinic have been in purebred Shorthorn cows. This feature only serves to reveal that the disease is spreading promiscuously through all breeds.

Johne's disease is also known as paratuberculous enteritis and also as chronic specific enteritis. It is a markedly chronic communicable disorder of cattle characterized by thickening and corrugation of the intestinal mucosa. Ultimately the disease manifests itself by a severe, more or less periodic diarrhoea and a progressive loss of flesh. Along with these phenomena, there may be observed a pronounced reduction in the milk yield, a staring, dull hair coat, anemia, and terminal cachexia.

The disease is caused by an acid-fast organism closely resembling the tubercle bacillus. It is known as the *Mycobacterium paratuberculosis* (Johne's bacillus). The organism is difficult to culture and aberrant strains are frequently observed. According to some workers, there appears to be a close relationship between this organism and the avian tubercle bacilli. The fact that avian tuberculin may be used as a diagnostic agent for Johne's disease is significant of some definite relationship between these two organisms.

Natural infection undoubtedly takes place through the digestive tract as a result of the consumption of contaminated food and water. In the animal body the habitat of the organism is in the diseased intestinal mucosa and the associated mesenteric lymph glands. In the diseased area of the gut it is found in large numbers where it shows a tendency to clump. Microscopically, the tissue reaction is somewhat similar to those occurring in tuberculosis without necrosis or caseation. Macroscopically, the diseased gut appears enormously thickened and in long standing cases is of a dark greyish colour with a milky mucoid exudate over its surface. The caecal mucosa usually manifests the more gross lesions.

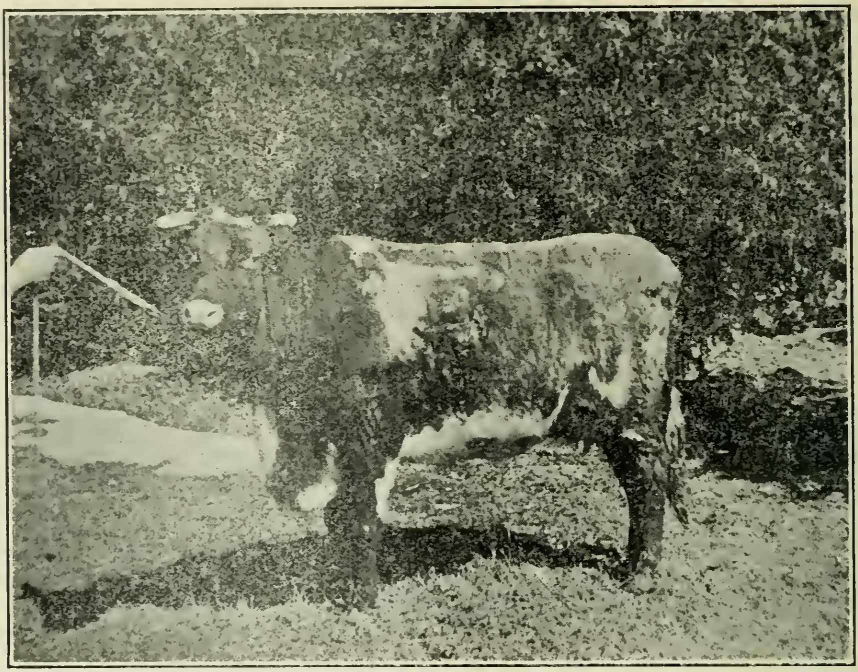
The disease is quite prevalent in European countries including England and the Channel Islands. In the United States it is becoming more prevalent. In Canada, the occurrence of it is becoming more frequent. In its nature the disease is very insidious for many months, even years, may elapse between the time of infection and the obvious manifestation of it. The insidious character and chronicity of the disease favour the spread of the infection, for carrier animals may be bought and sold, be transported from one herd to another, without those concerned in the transaction having any knowledge of the fact that such an animal is a source of danger for other members of the herd in which it may be placed.

Because of the fact that many cases of the disease appear in relatively young cows, it is felt that in many instances the affected animals contract the infection while they are quite young (as calves). The first distinctive symptom is a chronic diarrhoea or repeated periodic attacks of it. On occasions during the later stages of pregnancy the diarrhoeic condition disappears somewhat, only to be followed by a more violent manifestation of it after parturition. There is no fever, the appetite usually remains good, but there is an increasing emaciation finally terminating in anemia and cachexia.

The diagnosis of the disease in its later stages may be accomplished by clinical observations. In some instances by microscopic examination of stained smears of scrapings from the rectal mucosa in which clumps of acid-fast bacilli may be found. There is also an allergic test in which Johnin, a preparation obtained from cultures of the bacillus, is used. Avian tuberculin preparations are also used for this purpose.

The following report is typical of the disease.

Clinic No. 645. The patient was a Shorthorn cow about five years old. She had raised two calves and was pregnant a third time. The present owner had purchased her about three years previous.



Shorthorn cow affected with Johne's disease

The first intimation the owner had of anything being wrong with the animal was observed during the summer of 1937 while she was on pasture suckling her calf. Periodic attacks of diarrhoea occurred. However, she kept in fair flesh until after she was stabled in the fall. During the winter, while being stable fed, she steadily grew worse for the diarrhoea became more persistent and she also lost weight. Some empirical treatment was applied, but was of no avail. She was submitted to the clinic on April 8th, 1938, and after a thorough consideration and clinical examination of her case a diagnosis of Johne's disease was made. To substantiate this finding, scrapings of the rectal mucosa were obtained, smears made and an acid-fast stain applied. Microscopic examination of the slide revealed the presence of numerous acid-fast bacteria in clumps. The clumping arrangement of the organism is very significant of Johne's infection. In each of the last four cases submitted to the clinic, the bacteria have been found by this procedure. It is admitted that this means of diagnosis is sometimes disappointing, but the writer is inclined to the belief that in well established cases the bacteria can always be demonstrated. In this regard it is advisable to use a curette and carry it well forward into the floating colon. When this is done, make sure to scrape a curette-ful of the mucous membrane off the gut and the smear should be made from the membranous material rather than from exudate which may be scraped off the rectal wall. It may be (in those cases where the organism is not found) that the scraping was not taken deeply enough.

This patient was also subjected to an allergic test with avian tuberculin to which she gave a typical reaction. Five hours after the intravenous injection of the reagent her temperature was 105° Fahr. This was the climax, for following that reading it gradually declined. Her highest pre-injection temperature was 101 6°. A rise of 2° temperature is considered a positive reaction. In addition to the thermic reaction, the patient had muscular tremors and became more diarrheaic during the course of the test. These are also significant allergic reactions.

Johnin and other testing reagents used for the diagnosis of this disease are not considered entirely reliable but their use is advisable for if reactions do occur they assist in confirming other diagnostic features. While admitting that we have not tested any great, number of cattle for this disease, at this institution, at the same time we have rarely been disappointed on those occasions we have used the intravenous testing reagents.

Because of the increased interchange of cattle nowadays, there is a great likelihood of this disease becoming quite widespread. It is incumbent upon the veterinary profession and the live stock men to acquaint themselves with this condition and to use such measures as are available to at once control any outbreaks of it occurring.

NOTES ON THE EXAMINATION OF SEMINAL FLUID

A. A. Kingscote, D.V.Sc.

An early diagnosis of low fertility or sterility in males of all species of domestic mammals will prevent obvious economic losses to the live stock owner. The reliability of a sire is based upon his breeding record, physiological and psychological condition, absence of genital disease, freedom from nutritional deficiency, and genetical factors. The existence of many abnormalities may be ascertained from a history, clinical examination or observation during mating. Supplementary examination of the semen is always advisable; it alone may show evidence of diminished or absent fertility and sometimes may be the only means of estimating the worth of untried males. In judging the potency of males, factors other than the characteristics of the sperm must not be ignored, for demonstrable changes are not invariably present in the semen of unsatisfactory animals.

The purpose of the present work is to collect and present in a convenient form information regarding the technique of examining and evaluating semen of the domestic animals.

Routine procedure, which veterinarians may practice, is described in detail. References to literature alone are made to those methods in technique chiefly of interest to the research worker or laboratory technician.

Collection of Semen

Suitable samples of seminal fluid may be obtained immediately after mating at any time during the active breeding season. Following periods of prolonged sexual rest, two matings at least are permitted before a sample is taken, for when semen has been stored in the epididymis for a considerable time, physiological changes, or death, of the spermatozoa may occur normally. Any excess mucous, which might dilute the sperm, should be previously removed from the vagina.

In the larger animals, samples are collected with a vaginal speculum or spoon, or in an artificial vagina. Samples are stored in clean, dry glass vessels, free from any trace of disinfectants. Light should be excluded. In small animals a pipette or glass rod is used. Sufficient semen will adhere to the latter for microscopic examination. Drip samples are obtained from the male immediately after mating; a petri dish is convenient for taking such samples.

When semen is intended for bacteriological examination, the vagina is douched with saline and water, but no soap or disinfectant is used. The sample collected is stored in a sterile vessel. If the quantity obtained is small, sterile physiological salt solution is added to prevent drying.

Spermatozoa will survive longest at a temperature slightly above freezing. They are destroyed at about 120 degrees Fahrenheit. Their longevity varies from several hours to a few days or longer, depending on the species of animal from which they are obtained, their vitality, and their physical and chemical environment.

Method of Routine Examination

As a method for routine examination, it is suggested that semen be first examined macroscopically; then a hanging drop or cover glass preparation examined microscopically, in which activity and density of spermatozoa is noted. Next examine an opal blue stain preparation; search for any evidence of immaturity, defects or abnormalities among the spermatozoa. (Fig. 1.) Record the number of abnormal spermatozoa as so many per thousand. Stain a fixed film with Loffler's methylene blue and examine it for the presence of pus and other cells or foreign elements.

When time permits, and suitable equipment is available, the number of spermatozoa is calculated with a haemocytometer, and morphological studies are made from smears stained with basic carbol-fuchsin. A number of heads (300) may be measured longitudinally with a micrometer or by other and more accurate means.

The data recorded during the course of examination are tabulated in a convenient form and the sample of sperm evaluated.

Macroscopic Examination

Samples are best examined immediately after collection. Of great assistance in recognizing abnormalities is a thorough familiarity with the normal appearance of the semen of various species of animals. The actual quantity can only be estimated when the entire ejaculation is collected free from vaginal dilutions. The quantity varies greatly in individual males. After periods of prolonged sexual rest it is at its maximum; it diminishes, although perhaps remaining fertile, as sexual activity is increased. At the end of a vigorous breeding season it may be but a fraction of the original amount. The quantity may vary also when abnormalities exist in the accessory sexual glands. Occasionally there is no seminal fluid (oligospermia).

The odour of fresh, normal semen is distinctive, faint and varies with the species. Contamination with urine or putrefactive substances from infected genitalia may be obvious.

Turbid-white or bluish semen indicates low content of spermatozoa (oligozoospermia); the more transparent the less numerous are the spermatozoa. The following colour changes are significant: A pink tinge denotes fresh blood following injury to the genitalia; brown, reddish-brown, or green, degenerated blood or tissue from diseased male or female genitalia; yellow, when it is not a normal colour, contamination with urine. Lumps or flocci are associated with genital infections.

Normal semen is alkaline and tends to liquefy when left standing.

Microscopic Examination

Semen is examined microscopically to ascertain the degree of motility, numbers, morphology, and degree of maturity of the spermatozoa, for the presence of cells, foreign substances and bacteria.

A suitable magnification is obtained with a 16 mm. objective (high dry) and x10 ocular. For stained specimens an oil immersion objective is desirable.

Activity of Spermatozoa.

As soon as possible, preferably immediately after collection, the spermatozoa are examined for motility. A hanging drop is prepared, or a cover glass gently placed on a drop of semen. In cold weather the slide may be warmed on the back of the hand to stimulate activity. All glassware must be free from alkali as the presence of slight traces will cause increased movement. Normal spermatozoa exhibit a progressive forward motion. It should be noted whether the rate is normal or sluggish. Another type of motility is oscillatory; here the spermatozoa show convulsive movements without change of position; such is abnormal.

Motility may be roughly evaluated and recorded by estimating the number of spermatozoa exhibiting progressive motion in fifth of the total number seen in the field of vision under the microscope. An average of several fields may be taken. Oscillatory motion may be recorded "O" and immotility or necrospermia "N." E.g., twenty-five spermatozoa in field of vision, 10 exhibit progressive motion, remainder oscillatory motion or immotility, recorded 2/5 ON. (Imperial Bureau of Animal Genetics, 1933) Activity does not necessarily indicate fertility.

Estimating Numbers of Living and Dead Spermatozoa.

When semen is diluted with water, the tails of living and active spermatozoa become coiled (Fig. 1, 11) while those of the inactive (possibly dead) remain straight. The numbers in each group may be estimated at the same time the total number of spermatozoa per cubic mm. is being calculated by the haemocytometer method; water instead of NaCl or KOH is used to dilute the semen *(vide infra)*. The method requires further study before complete reliance can be placed upon it.

The degree of survival among spermatozoa at consecutive intervals of time, by which one sample of semen may be compared with another, is calculated by making use of a method of indices of survival. (Imperial Bureau of Animal Genetics. 1933.)

Rough Method of Estimating Numbers of Spermatozoa.

The number of spermatozoa are roughly estimated by noting their density upon a smear in the field of vision under the microscope. Observations are recorded as dense "D," medium "M," rare "R," absent (azoospermia) "A."

Method of Estimating the Number of Spermatozoa with a Haemocytometer.

An estimation of the spermatozoa per unit volume is carried out with a haemocytometer and a graduated pipette. The procedure is similar to that of making blood counts and the same equipment is used. Dilutions of 1:10, 1:100 or 1:200 are made, depending upon the density of the spermatozoa. The Bureau of Animal Genetics (1933) suggests 1:200 for ram sperm; Lageroff (1936) 1:100 for bull semen or 1:10 when the concentration of sperm is low. Three per cent saline solution is used as a diluting fluid; it also serves to kill the spermatozoa. Lageroff (1936) suggests using 2% KOH solution, the pipette being filled to two-thirds after which it is well shaken and filled with a 1% methylene blue solution, the spermatozoa assuming a faint blue tint which is easily observed. The number of spermatozoa in 80 squares are counted, multiplied by 50 and the number representing dilution used, which will give the number of spermatozoa per cubic mm. Only spermatozoa with their heads in the square are counted;

when they lie on the lines only those on the upper and righthand side are counted. Otherwise, to obtain an accurate count, the same precautions taken in blood work are followed (Stitt, 1927). Lageroff (1936) considers repeated counts of 200,000 spermatozoa per cubic mm. in bulls are indicative of low fertility or sterility. After excessive sexual activity, numbers may be low yet the spermatozoa active and fertile.

Morphology.

The shape and size of spermatozoa varies with the species of animals. Familiarity with normal variations can be gained by examining specimens from known fertile males.

The structures examined in a spermatozoön are the head, including the nucleus in its posterior part; the neck, including the centrosome represented by two small granules termed the anterior and posterior end knobs; the body or middle piece; and the tail. (Fig. 1, A.) Other structures described in textbooks of histology are difficult to distinguish with routine methods. The heads of most spermatozoa are rounded anteriorly when in their normal position, while when lying on their sides the heads appear pointed anteriorly.

Some abnormalities may be observed with a good microscope after mobility has ceased, but the detection of morphological changes is facilitated by staining the spermatozoa. This also permits the use of the oil immersion lens with the obvious advantages of its greater magnification. Although spermatozoa may be seen, like bacteria, in their natural state, certain structural characteristics are only visible when a stain is used.

Opal Blue Stain.

A simple and practical field stain for studying morphological details in outline is made by heating a small quantity of opal blue solution in a test tube, cooling and mixing two or three drops with one or two drops of semen on a slide. From this mixture a smear is made and allowed to dry in the air. The spermatozoa appear negatively but clearly defined against a dark blue background; significant abormalities, if present, being apparent. (Lageroff, 1936.)

Preparing and Fixing Smears for Other Methods of Staining.

Permanent smears of spermatozoa, suitable for morphological studies, are made by placing a drop of semen on a clean slide and spreading it out evenly with another slide, in the same manner as blood films are prepared. Smears so prepared are dried by waving them in the air, fixed quickly in the flame of a Bunsen burner or alcohol lamp or, better still, in an oven at 100 degrees Centigrade for 45 minutes. Further treatment should be delayed for several hours or until the next day.

Clearing or Removing Mucus and Staining.

Smears prepared in the above manner may be stained by any one of the following methods. To obtain satisfactory results some practice may be required.

Basic Carbol-Fuchsin (Savage, 1936).

1. Fixed dried films by heat (100 degrees Centigrade in an oven for 45 minutes).
2. Dissolve mucus by immersion in 1 per cent aqueous solution of chlorozene for 15 to 30 minutes. Warming a little helps.
3. Rinse slide in distilled water.
4. Dip slide in 95 per cent alcohol. Shake off excess.

5. Stain at once with basic carbol-fuchsin for 15 to 20 seconds.
6. Rinse in water, dry and examine.

Triple Stain (Williams, W. W., 1920).

1. Clear fixed film in ½ per cent chlorozene solution for about 7 minutes.
2. Rinse in tap water.
3. Dry, or wash in 95 per cent alcohol.
4. Stain for 2 minutes with solution No. 1 *(vide infra).* Change stain continually to prevent its precipitation.
5. Wash under gentle stream of water.
6. Counterstain for 3 seconds with solution No. 2.
7. Examine under microscope. (If counterstain with methylene blue is insufficient, stain again for 2 or 3 seconds. If eosin-carbol-fuchsin stain is not properly applied and precipitate occurs, remove stain with 95 per cent alcohol and restain.)
8. Dry smear in air.
9. Examine under oil immersion lens.

Stain No. 1

Alcohol	1 part
Carbol-fuchsin	2 parts
Alcoholic eosin	1 part

Filter until no precipitate occurs.

Stain No. 2

Loeffler's Methylene Blue	1 part
Distilled water	1 part

Triple Stain (Lageroff, 1936).

Lageroff (1936) states the method elaborated by Williams seems most suitable. He describes the technique with the following modifications:

1. Treat fixed smear with ½ per cent chloromin solution for one-half to 1 minute to remove mucus.
2. Wash rapidly in distilled water.
3. Wash rapidly in 96 per cent alcohol.
4. Stain with carbol-fuchsin-eosin for 2 to 5 minutes.
5. Wash in water.
6. Stain with methylene blue for 2 to 5 seconds.

Staining Solutions

Carbol-fuchsin: Stock solution: 10 gr. fuchsin, 100 gr. 96 per cent alcohol. For staining mixture: 10 gr. stock solution, 100 gr. 5 per cent carbolic acid solution. *Eosin,* saturated alcoholic solution. *Loeffler's Methylene Blue*: stock solution 10 gr. methylene blue, 100 gr. 96 per cent alcohol. For staining solution: 30 gr. stock solution, 100 gr. 0.01 per cent potash lye.

Miscellaneous Stains.

Other methods of fixation and staining suitable for histological studies are described by Guyer (1930).

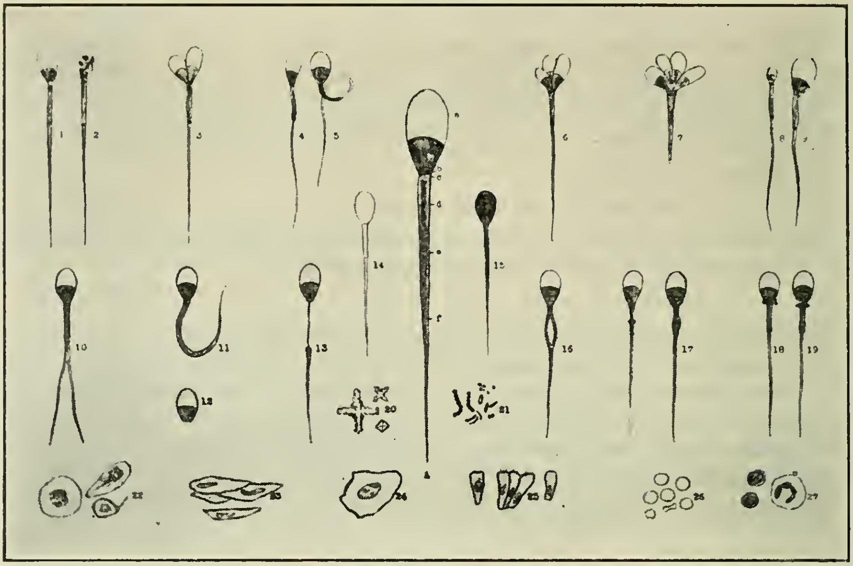


Fig. 1—Diagrams illustrating various forms of Stained Spermatozoa, Cells, Bacteria and Crystals described in the text.

(A) Structure of normal spermatozoa, (a) head, (b) anterior end knob, (c) neck, (d) body or middle piece, (e) end ring, (f) tail.

(1) Broken at neck or loose head, (2) Granular staining of head, (3) Double head, (4) Tapered or pear-shaped head, (5) Coiled tail which sometimes resembles double head, (6) Triple head, (7) Quadruple head, (8) Small or knob-kerry head, (9) Large head, (10) Double tail, (11) Coiled or bent tail, (12) Tailless, (13) Filiform middle piece, (14) Phantom staining, (15) Intense, uniform staining, (16) Double middle piece, (17) Beaded and enlarged body or middle piece, (18) Cytoplasmic extrusions at base of head, (19) Protoplasmic beads or drops at neck *(indicating immaturity, sexual exhaustion or approach of genital disease)*, (20) Crystals, (21) Bacteria, (22) Maturing spermatic cells, (23) Squamous epithelium, (24) Cuboidal epithelium, (25) Columnar epithelium, (26) Red blood cells, (27) White blood cells.

Appearance of Stained Spermatozoa.

When stained a normal spermatozoön should show the head with the anterior portion only faintly stained and the posterior nuclear portion more deeply stained and clearly divided from the former. With careful technique and practice, the two centrosome granules in the neck may be seen. The tail stains deeply. Any variations are noted, such as failure to stain (phantom staining), uniform intense staining or the entire spermatozoön, or the presence of abnormal granules. These are all evidence of degeneration or structural abnormalities which, if sufficiently numerous, may affect the breeding qualities of the sire. (Fig. 1.)

Size.

Spermatozoa in a given sample of semen should be uniform in size. Variations, particularly in the heads, should be noted especially. Williams and Savage (1925), working with bull semen, stress the significance of variations in the size of the heads; such variations being slight in animals with good breeding history, and more marked in others. Minute, although apparently significant, variations can only be estimated with special laboratory equipment. A micrometer may be used to measure the heads. The above authors used a microprojection apparatus, which threw images of 3,000 diameters upon a screen. The images were measured with dividers, and the actual size obtained by placing the calipers against a scale. By this means it was estimated the mean head length of bovine spermatozoa varied with individuals from 9.1 to 10.4 microns; in animals with a good breeding history, the standard deviation was less than 1.0 and in poor performers the co-efficient of variation reached 3.5 or more. Isa (1936) describes a photoelectric technique by which the area of the heads may be accurately measured.

Immature Spermatozoa (Vide Fig. 1).

These may be distinguished to a certain extent by the presence of protoplasmic drops or beads upon various parts of the body. When near the neck, the spermatozoa are from the upper part of the epididymis. When such drops appear upon a more posterior position on the body the spermatozoa are usually from a correspondingly lower portion of the epididymis and consequently more mature. The presence of these bodies, especially in the vicinity of the neck, is an indication of sexual exhaustion or the approach of genital disease, and is associated with low or absent fertility. Primordial spermatic cells, or the precursors of spermatozoa occasionally appear in samples of semen and are of similar significance, as the immature spermatozoa.

Abnormal Forms.

Most conspicuous of changes in individual spermatozoa are abnormal forms, among which may be enumerated as small, large, tapering, double, multiple or loose heads, and cytoplasmic extrusions at the base of the heads, filiform, double or beaded bodies; and absent, undeveloped, coiled, double or multiple tails, or tails arising from the sides of the heads.

To obtain a definite idea as to the significance of abnormal forms, one thousand spermatozoa are examined and the actual number of abnormal sperm recorded. McKenzie and Phillips (1934) observed in an actively breeding ram that the abnormal count rarely exceeded 50 - 100 per thousand, while in unsatisfactory rams it ran 146 per thousand and upwards with an increasing variety of malformations. It is interesting to note that these authors were able to produce an increased number of abnormal forms by insulating the scrotum. Lageroff (1936) concludes that 20% or 200 abnormal spermatozoa per thousand may occur in fertile bull semen, but that when it exceeds 200 the value of the semen is questionable.

Cells, Granules and Crystals.

Besides spermatozoa, semen may contain various cellular elements including red and white blood corpuscles, blood clots, fibrin, granular cells from the seminiferous tubules, hyaline and amyloid bodies, fat globules, albuminous granules, crystals of spermine phosphate (which form when the fresh semen from some animals dries on the slide), squamous and other cells from the vagina and vaginal discharges. Discoid acidophile bodies 2 to 3 microns in diameter are discussed by Williams and Savage (1925). A small number of these foreign elements may appear in normal sperm, but when present in abnormal numbers they indicate genital disturbances. Confusion as to the source of certain foreign elements may be avoided if the female is clinically examined and found normal.

Bacteria.

Streptococci, staphylococci and other bacteria, when present in sufficient numbers, may be seen in smears stained with methylene blue or suitable bacteriological stains. When infection is suspected, cultures should be made from the semen even if no organism can be demonstrated in a smear. The stains used for studying the morphology of the spermatozoa are not suitable. Suspected contagious abortion or tubercular infections localized in the genitalia should be confirmed by suitable diagnostic tests for these diseases.

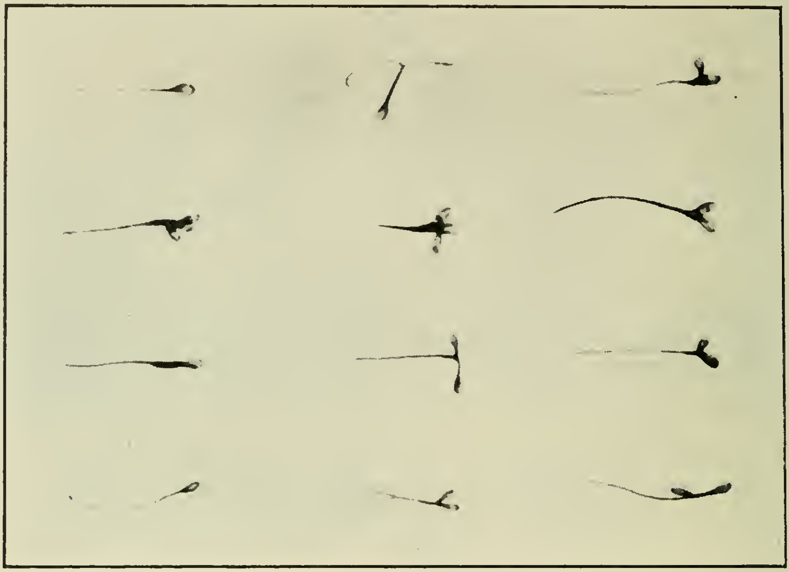


Fig. 2.—Photomicrographs of Abnormal Spermatozoa (Stallion). A few of these forms are not significant. When the number exceeds 200 per 1,000 in Bulls and 150 per 1,000 in Rams the semen is of questionable value.

Recording and Evaluating Observations

Accurate conclusion regarding the degree of fertility cannot always be drawn from a casual examination of the semen under the microscope. A method of scoring sperm and at the same time preserving a permanent record for future comparisons is suggested by the Imperial Bureau of Animal Genetics (1933). The method has already been touched upon in some of the preceding paragraphs. The following is a summary:

Motility.

Progressive Motion	5, 4/5, 3/5, 2/5, 1/5
Oscillatory Motion	O
Immotility (Necrospermia)	N

Density (indicating numbers in smear).

Dense	D
Medium	M
Rare	R
Absent (Azoospermia)	A

It is here suggested that, in the formula, the number of abnormal spermatozoa per thousand be included.

The formula for a given sample of sperm may be readily recorded by tabulating the information obtained under the microscope.

Examples.

1. Three-fifths of spermatozoa exhibit progressive motion. Spermatozoa very numerous. Abnormal forms 40 per thousand. 3/5 D 40.

2. One-fifth of spermatozoa exhibit progressive motion, some oscillatory, some immotile. Density rare. Abnormal forms 365 per thousand. 1/5 ONR 365.

The above method of scoring, originally suggested in connection with evaluating sperm for artificial insemination, equally well might be applied in recording characteristics of spermatozoa in routine seminal examination. Sperm samples represented by a formula containing no number preceding the letters or 1/5R are considered unreliable.

The value of such formulae not only serves as a basis upon which to evaluate a given sample of semen but is a record by which further samples of sperm collected from the same animal may be compared.

Records also should include notes on the breeding history, clinical findings (if any), macroscopic examination of the semen, staining reactions and the nature of abnormalities of the spermatozoa.

Lageroff (1936), referring to bulls, states that a thorough examination of the semen can supply very good criteria for judging their fertility. This standard, in general, might be applied to the semen of other animals. There is reason to assume that serious disturbances exist in spermatogenesis or in the function of the accessory genital glands indicating that fertility is reduced or altogether absent when (1) the number of spermatozoa, with repeated examination, is low; (2) if the number of pathological spermatozoa exceeds 200 per thousand; (3) if a large number of immature spermatozoa are present; (4) if the immotility of the spermatozoa, with several examinations, is clearly reduced; (5) if pathogenic bacteria can be demonstrated in the semen.

SUMMARY

A monograph has been prepared upon the technique of examining seminal fluid. Routine methods are described in detail. The interpretation of observations is discussed.

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ANNUAL REPORT

OF THE

Department of Municipal Affairs

FOR THE

PROVINCE OF ONTARIO

1938 - 1939

PRINTED BY THE ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 31, 1939

ONTARIO

TORONTO
Printed and Published by T. E. BOWMAN, Printer to the King's Most Excellent Majesty
1939

To The Honourable Albert Matthews,

Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

The undersigned has the honour to present the Annual Report of the Department of Municipal Affairs of the Province of Ontario for the year ending the 31st of March, 1939.

Respectfully submitted,

(*Signed*) Eric Cross,
Minister.

ANNUAL REPORT
OF THE
DEPARTMENT OF MUNICIPAL AFFAIRS
FOR THE
PROVINCE OF ONTARIO
1938 - 1939

The Honourable Eric Cross,
Minister,

Department of Municipal Affairs.

Sir:

It is with a great deal of pleasure that I submit herewith for your consideration the annual report of the Department, particularly in view of the improvements in municipal financing and administration that have been evident this past year.

This report considers the fifth year of the Department's administration. Prior to the Department's formation in 1934 there was widespread demand for improvement in the system of municipal government by means of more centralized assistance and control. The trend of conditions since that time has placed additional emphasis on this need and the Department is being called upon more and more each day to assist and advise municipalities throughout the Province.

Functions of the Department

The functions of the Department as provided in The Department of Municipal Affairs Act, 1935, are briefly as follows:

1. Administration of all statutes concerning municipal institutions and affairs.
2. General oversight over municipal institutions and their administration.
3. Formulation and regulation of a system of estimates, bookkeeping and accounting to be adopted by municipalities and the forms to be used.
4. Gathering of statistics and information from municipalities.
5. Regulation of the system of auditing of the books of Municipalities and the reports to be made by municipal auditors.
6. Analysis of municipal statistics.
7. Preparation and publication of statistics, reports, bulletins, etc., to disseminate information and advice in relation to municipal affairs.
8. Study of municipal government and administration.
9. Assistance and advice to municipalities.
10. Preparation of proposed changes in statutes relating to municipalities.
11. Control and supervision of municipalities which have made default in debt payments or are threatened with financial difficulties.

The foregoing indicates in a small way the wide range and scope of the Department's activities.

SUPERVISED MUNICIPALITIES

Since the formation of the Department the major activities of the staff have been directed towards the supervision of municipalities that had defaulted in payment of their debenture debts and other obligations. Some 35 municipalities in Ontario have been in this category representing approximately 20% of the total municipal debt of the Province.

Very marked progress has been experienced in improving the financial position of these municipalities. A large number of them have now effected refunding plans with their creditors and in doing so removed the stigma of default.

A separate report from the Chief Supervisor of Municipalities appended hereto, sets out the position of each defaulting municipality at the present date with respect to refunding.

NON-SUPERVISED MUNICIPALITIES

By reason of the above improvement and the further fact that no additional municipalities have been placed under the supervision of the Department through default in meeting their obligations, it has been found possible to gradually extend our facilities and devote more time to the problems of the non-supervised municipalities.

A most pressing need at the present time is to provide standardization of municipal budgeting, accounting, and auditing. The general lack of direction in this field of endeavour since 1920 has placed the municipalities at a decided disadvantage, particularly in the light of existing conditions during the past few years.

The foundation for this work has now been laid and our efforts in this direction have proved most welcome, as manifested by the response from municipalities generally to the suggestions put forward from time to time.

As a further impetus in this particular work, the Department has co-operated with the University of Western Ontario, London, Queen's University, Kingston and the University of Toronto in conducting schools for municipal officials. Representatives from the Department have taken part in all of these courses with lectures designed to cover as wide a field as possible.

Attendance at these courses of instruction has averaged well over 100 municipal officials in every case. Numerous inquiries have already been received with respect to the proposed courses to be held this year which indicates the continued interest of municipal officials in this field of endeavour.

MANUAL OF ACCOUNTING

The Department is also co-operating with the Municipal Finance Officers' Association of United States and Canada in conducting research work on municipal accounting with a view to having prepared a "Manual of Municipal Accounting" for the immediate use of towns and villages. It is further proposed to extend this manual for use by other municipalities with the expectation of placing general accounting practice on a more substantial basis than has obtained in the past.

A member of the Department staff has been devoting his full time to this important work and in conjunction with the gradual development of the manual. a model system of accounting is being put into use in representative municipalities. The object in view will assure the municipalities of accounting systems that can be recommended from actual experience and not based on theoretical ideas alone.

The introduction of such a reference text in Ontario will standardize and improve the quality of accounting systems as well as budgetary control and procedure to the benefit of all concerned, and further, make it possible for the Department to secure more uniform returns and information from municipalities with respect to their affairs.

MUNICIPAL STATISTICS

One of the particular functions of the Department, as referred to in the early part of this report, is the analysis of Municipal statistics, and the compilation and publication of statistical reports, bulletins, etc., which disseminate timely information relative to municipal affairs.

Prior to the formation of the Department, such published reports merely scratched the surface of this important work. To meet the wishes of the public the Department since 1935, has endeavoured to provide more statistical data each year and has extended the annual bulletins on a par with the best in the Dominion. The statistical report for the year 1937, just recently released, reflects the most substantial improvement over previous issues that has been experienced to date.

The reception accorded this latest publication indicates quite forcibly the long-felt need for some central agency through which financial as well as statistical and other information pertaining to municipalities and their administration may be obtained.

The Department feels moreover, that its annual report can be improved further but this improvement cannot be wholly obtained until municipal auditing and accounting have experienced substantial adjustment.

The Annual Report of Municipal Statistics for the year 1937 is appended hereto and forms a part of this report. As a further appendix there is also included herewith a report from the Municipal Statistician relative to certain statistics of general interest.

DOMINION PROVINCIAL CONFERENCE

In the last report of the Department for the year 1937-38. reference was made to the Dominion-Provincial Conference on Municipal Statistics held at Ottawa in July of 1937 under the general direction of the Dominion Bureau of Statistics in co-operation with representatives from the Provincial Governments, various associations and larger cities in the Dominion.

The continuing committees set up at that time have been devoting a great deal of time and study to the respective problems referred to them by the Conference at large. Their reports are now being assembled for presentation at the next meeting which it is anticipated will be held during 1939.

The object of this Conference. of course, is to devise uniform methods of reporting municipal statistics. If all Provinces are prepared to accept and support the recommendations of their representatives, with a view to making these effective at the earliest possible date, such will truly be a milestone in this important field.

MUNICIPAL LEGISLATION

In the matter of municipal legislation the Department also takes a leading part. During the past year many suggested changes in the laws governing municipal institutions were received by the Department. These have all been carefully considered and where advisable have been recommended as amendments to the Statutes. The Legislative Assembly has had the opportunity of considering the same and many have now in effect become law.

ASSESSMENT

No mention has yet been made of the problems relating to assessment of local municipalities and counties. The methods employed by many local assessors in the past has produced very misleading results in the way of property valuations, and in numerous instances resulted in a grossly inequitable distribution of the total tax burden within the municipality.

The Department has stressed both the need and the possibility of adopting scientific methods for making assessments wherever possible and has endeavoured to discourage the continuation of the popular "Eye-ball" method.

The Department has also considered implementing the necessary machinery whereby counties can adopt uniform methods of assessment and in addition could also set up county assessment commissions to deal with the matter of assessments of local municipalities. Before taking definite action, however, it has been deemed advisable to have several representative counties consider the proposed changes. It is intended during the coming year to fully explore certain principles relating to county and local assessments before effecting the necessary legislation, which should result in many worthwhile improvements accruing to the benefit of all concerned.

MUNICIPAL SUBSIDY

The 1 mill subsidy was again paid to municipalities this year making the second consecutive year they have had this additional source of revenue.

The total subsidy payment for the current year was based on the assessed value for taxation for 1938 and amounted to $2,941,477.08 as compared with the total payment of 2,920,956.39 for the year 1937.

A comparison of these subsidy payments on the basis of benefits accruing to the different classes of municipalities is as follows:

Cities	$ 1,760,587.18	$ 1,767,659.08
Towns	272,094.69	277,913.26
Villages	78,607.63	79,753.35
Townships	807,635.09	814,130.02
Commissions, etc.	2,031.80	2,021.37
Total	$ 2,920,956.39	$ 2,941,477.08

A statement is also included in the appendices hereto which shows a further distribution of the 1938 subsidy payments both on the above basis and also according to counties and districts in the Province.

OVER-GOVERNMENT

The Department is cognizant of a condition of over-government and feels that some reduction in the number of governing bodies in Ontario could be effected without disrupting local representative rights. It also feels that in cases of exceptional development adjacent to large urban areas, the conflicting interests could better be served by amalgamation of specific services, or annexation of part or parts of the areas affected.

With a view to providing a solution to one such problem that exists in the Toronto Area, the Department assumed leadership in establishing a Committee to study the problems of the Area and to make a report thereon. This "Committee for the Study of Municipal and Related Problems in Toronto and its Neighboring Municipalities" is fully seized with the size of the task before it. A volume of material will have to be subjected to its scrutiny before a full appreciation of all of the salient facts and ramifications of the problem may be had. Some time yet will elapse before a comprehensive and intelligent report embodying practical recommendations (which will provide a solution to the financial and other difficulties as a result of the extraordinary mushroom growth of the Toronto Suburban municipalities) will be available for consideration.

There are numerous other instances throughout the Province where amalgamation or unions of two or more governing bodies can quite readily be affected with resulting benefits to all concerned and without prejudicing or affecting in any way whatsoever the representative rights of the respective areas.

The Department has under consideration for intensive study the possibility of such amalgamations of Ontario municipalities having in mind the reduction in cost of government particularly through economies in administration, centralized control and distribution of common services. This in turn will result in substantial improvement in the financial standing of the municipalities concerned, which in itself is of paramount importance.

Acknowledgements

The work of the Department in all matters within the scope of its jurisdiction has been greatly facilitated not only by the co-operation it receives from the other Department of the Government with which it comes in contact almost daily in many cases, but also by the co-operation of the municipalities themselves through their appointed and elected officials.

The Department at this time wishes to express its appreciation to all concerned for the support and co-operation with which its policies and efforts have been received, without which it would not have been possible to obtain many of the accomplishments that have been experienced to date.

In conclusion may I express my deep appreciation for the consistent devotion of the staff to the work of the Department and their untiring efforts, particularly at certain periods of the year when considerable night duty is required. And may I also extend the appreciation of all for your keen understanding and direction of our activities.

E. A. Horton,
Deputy Minister.

Parliament Buildings, Toronto,

April 26th, 1939.

REPORT OF THE CHIEF SUPERVISOR

1938-39

I have the honour to submit a report dealing with the activities of this branch of the Department, both with respect to supervised and non-supervised municipalities.

The Department had under its direct supervision at the close of the fiscal year ending March 31st, 1939, 35 municipalities in Ontario, representing 3 cities, 22 towns, 1 village and 9 townships. Of these, 1 city, 2 towns and 1 township are in districts in Northern Ontario, and the remainder are in counties ranging in location from Essex county in the west to Prescott County in the east, and from Welland in the south to Simcoe and Haliburton in the north.

Prior to the formation of this Department, the Town of Collingwood had issued debentures, guaranteed by the County of Simcoe, to provide funds for the loaning of money by way of mortgage to the Collingwood Terminals Limited. By reason of the company defaulting on the mortgage, the town was forced to default during 1937 on the debentures issued for this purpose. By reason of arrangement made by the Department, the company was placed in a position to secure funds to meet the temporary default. Further default, however, took place in 1938, thereby bringing about the necessity of supervision. The Town made application to the Ontario Municipal Board to come under Part III of The Department of Municipal Affairs Act and the Board, pursuant to hearing the application, issued its Order on February 10th, 1939. Every effort is now being made to arrive at some arrangements with the terminal company that will be satisfactory to all. In the meantime, under the Department's supervision, the town is carrying on without impairment of essential services.

Due to the large area over which the supervised municipalities are spread and due, also, to the multiple variety of problems arising from local circumstances and conditions, the giving of adequate and beneficial supervision to the affairs of these municipalities represents a very large proportion of the work of this branch of the Department.

Due to the policies effected by the Department it has been possible to build up the finances of several of the supervised municipalities to the point where they have been able to enter into satisfactory arrangements with creditors for repayment of their debts. This, of course, is the principle objective with respect to each of these municipalities so that once again they might take their place among the solvent and self-sustaining municipalities of the Province.

Very important progress was made in this direction during 1937, during which year the debts of 8 municipalities were reorganized on a basis acceptable to both parties interested. In the past year this position has been further improved, 7 more municipalities having completed refunding plans, making a total of 15 municipalities that have now emerged from default under the guidance and direction of the Department.

Plans are now pending for 6 other municipalities, and some of these are in process of actual negotiation with creditors. It is fully expected that these six municipalities will reach agreements in the very near future.

The 13 remaining municipalities have not previously been in a position to start refunding. Preliminary surveys have been made, however, to determine the possibilities in this regard. As many of these as possible will be brought forward for consideration this year, but there are still a number of cases where it is felt to be somewhat premature for consideration to be given any definite refunding proposals.

The position with respect to the refunding of the supervised municipalities as at March 31st, 1939, is reflected in the following compilation:

Refunding Plans Completed

Cities

Niagara Falls
Sudbury
Windsor

Towns

Kingsville
Leamington
Leaside
Midland
Mimico
New Toronto
Pembroke
Trenton
Weston

Townships

Calvert
Etobicoke
North York

Refunding Plans Pending

Towns

Fort Erie
La Salle
Thorold
Riverside

Townships

Sandwich East
Sandwich West

Under Preliminary Consideration

Towns

Blind River
Eastview
Essex
Hawkesbury
Penetanguishene
Rockland
Sturgeon Falls
Tecumseh

Village

of
Long Branch

Townships

Dysart, et al
East York
York
Scarborough

Although, as previously stated, a number of municipalities have completed their refunding, their affairs are still subject to a measure of supervision by the Department. In many instances, this continued supervision has been at the instigation of the municipalities themselves, there seeming to be a growing recognition of the fact that there are benefits still to be obtained under this arrangement even after refunding. Evidence of such benefits may be had from the fact that in some cases following refunding, it has been possible to market quite large issues of debenture at a yield of 3.75% or less, such issues being contingent upon a continuation of supervision. This is an extremely healthy condition to have achieved in such a considerable short period of time and reflects the restored confidence in the financial stability of these municipalities. It is also an indication of the increasing confidence that prevails generally in respect of municipal credit, which today is the highest experienced for some time past. It is hopefully anticipated that as market conditions from time to time allow, it will be possible to call in debentures and re-issue them with considerable savings in annual interest charges.

It would never have been possible to achieve the enviable position illustrated by the foregoing compilation without the continued co-operation of the municipalities concerned. Despite sacrifices that have been necessary to this improvement, they have all faced their problems squarely and it has been possible to render adequate services but without frills to the local citizenry.

Then, too, this branch is extending services such as those mentioned above to non-supervised municipalities, giving advice with respect to interest rates and terms for debentures. Helpful assistance has been given in the inspection and valuation of sinking funds and advice given as to the administration of these funds.

Mention should be made of the City of North Bay which, while under the supervision of the Department, has never actually been in default. Under careful supervision, large bank loans have been gradually reduced. There are other municipalities where the Department has lent assistance more or less continuously and others, mainly in Eastern Ontario, where assistance has been given in preparing the budget.

With the substantial improvement experienced in the position of supervised municipalities, the Department has seen fit to inaugurate a change in policy so as to serve, more effectively, the needs of the non-supervised municipalities. More and more of the Department's time and attention is being directed towards the problems of these municipalities, and the increased demand for assistance and advice indicates both the desire and need for such attention.

Under the new policy the Province has been divided into 6 areas or districts with an official of the Department placed in charge of each. The boundaries of the respective areas have been determined with regard to the magnitude of the problems of the constituent municipalities and with a view to providing as equitable a distribution of work as is possible under existing conditions.

This policy should prove to be eminently satisfactory and tend to bring about a closer relationship between the Department and the various municipalities throughout the Province, and it is felt that it presents the nearest approach to the true functions of a branch of this character since the inception of the Department.

As a result of this change, there is already a noticeable increase in the demand from municipalities and officials for the services rendered by the Department. The assignment of a Department official to each portion of the Province has meant both the indication of a definite official with whom each municipality can take up any matter it wishes and, at the same time, placing on that official the responsibility of keeping close watch on municipal affairs in his area.

It is hoped in the coming year to have an official visit every municipality in his district at least once. Whether this will be possible, and at the same time deal with the problems of the supervised municipalities in each district, remains a matter of conjecture until the new policy has been put into actual practice and the results of a full year's operations determined.

Increasing attention is now being given to the possibilities of reducing the number of bodies controlling municipal affairs. The supervisor for Eastern Ontario is conducting a survey of the efficiency of the smaller rural units to ascertain what improvements can be made. In many cases, municipalities are too small to provide a salary sufficient to remunerate competent officials.

The major inquiry along these lines, however, is that being conducted by the Committee for the Study of Municipal and Related Problems in Toronto and its Neighboring Municipalities. Many agitations have been made in past years for a study of the problems of this area and many attempts to do so have been commenced. It is believed, however, that it is fair to say that this is the first occasion on which an exhaustive study has been attempted. The size of the task facing the Committee cannot be appreciated too much. A situation that has been developing for scores of years to the point where dozens of governing bodies are involved, as well as all the services and utilities of a great city and its suburbs, requires patient and detailed study. While a considerable period of time has been spent on this work, it is expected to be some time yet before a comprehensive report dealing with this particular situation will be available.

Then, too, this branch is co-operating with the Department of Education in the movement towards larger units of school administration for townships. Much progress has been made in the townships under supervision in this direction. At this point it should also be pointed out that in the supervised municipalities in the Toronto area steps have been taken toward the equalization of teachers' salaries.

In the work of this branch, there has become increasingly evident the need for improvement in assessment, not only in providing a more scientific assessment within each municipality, but also in approaching a province-wide equalization of these local assessments. This is a matter which does not concern the local municipalities and the counties alone, but many of the departments of the Provincial Government as well.

The continual difficulties in county equalizations is consistently before the Department which has been particularly impressed with the costs involved in disputes arising over this matter. In arranging amicable settlement of several of these disputes, the Department has saved the municipalities concerned many thousands of dollars.

Much time has been spent in the schools given for municipal officials at the various universities in discussing this and other phases of this problem and great interest therein has been shown by the municipal officials. Then matters have also been discussed on many other occasions and the general opinion seems to view this as the most important problem facing municipal affairs in Ontario and one requiring solution at an early date. It is a matter in which the Province is deeply concerned because of the important part occupied by assessment in computing provincial grants and subsidies.

Continual study is being given to this problem. Dominion-wide attention is being given through the Committee on Assessment set up at the Dominion-Provincial Conference on Municipal Statistics in 1937. Within this branch, study is being made with a view to bringing down legislation to set out the proper methods and procedure to be followed in assessing and to improve the courts of revision. Further study is being given to the possibilities of introducing legislation to permit the formation of county assessment departments, a procedure which would automatically elminate the periodic difficulties in county equalization of assessment, and replace numerous, poorly-paid, part-time local assessors with a few full-time competent officials.

A. J. B. GRAY,
Chief Supervisor.

April 26th, 1939.

REPORT OF THE MUNICIPAL STATISTICIAN

There are 940 municipalities — counties, cities, towns, villages and townships — in Ontario at the present time.

The Annual Report of Municipal Statistics for 1937, which was just recently released to the public, reports on the affairs of 938 of these municipalities.

During the year 1938 there were 2 new municipalities incorporated, increasing the number to 940, such being the *Town of Larder Lake* incorporated as of the *1st day of April, 1938,* and the *Town of Levack,* incorporated as of the *14th day of December, 1938.*

Both of these new municipalities are located in Northern Ontario, the first mentioned being in the *District of Timiskaming,* and the second in the *District of Sudbury.*

There were no new incorporations reported in Southern Ontario, nor were there any erections of municipalities from one classification to another. Also there were no municipalities dissolved.

The last new incorporation in Southern Ontario was the Village of Barry's Bay in the County of Renfrew which was incorporated in 1933.

The last municipality dissolved in Ontario was in 1935 when, by The City of Windsor Amalgamation Act, 1935, the City of East Windsor and the Towns of Sandwich and Walkerville were amalgamated with the City of Windsor.

The task of accumulating and checking information from such a large number of municipalities and assembling the salient facts of each in the form of a published report is one of considerable magnitude.

Having been accustomed in the past to returns providing but meagre information as to their affairs, the municipalities experienced some difficulty at first in complying with the demands and requirements of the returns used by the Department. The chief reason for this difficulty was the fact that no uniform methods of accounting or auditing for municipal institutions prevailed in Ontario, but the various records of the municipalities' affairs, both as to form and the manner in which they were kept, were more or less dictated by local feeling notwithstanding the type or character of the municipality.

This condition delayed compilation and publication of statistical reports by the Department. A great deal of improvement in this respect, however, has been experienced to date, and each year shows a reduced number of municipalities that are not able to file their returns with the Department on time.

The various forms for returns to the Department have been gradually improved from year to year. It is now felt, however, that the latest forms, covering the year 1938, more nearly approach the ultimate goal in the way of municipal returns than previous ones. There have been fewer changes in these returns than in others and that this has been helpful to the municipal officials is already indicated by the manner in which they are being received by the Department at the present time.

It should not be construed, however, that there will be no more changes in these returns in the future. While they may now be nearing perfection from our local viewpoint, there is widespread demand for the general standardization of municipal statistics throughout Canada. Such demand gave rise to the Dominion-Provincial Conference on Municipal Statistics held in Ottawa in 1937, and once the recommendations of the various sub-committees appointed to continue the study of the several phases of the matter, on each of which this Department has representation, are adopted by the reconvened Conference at large, this Department should at the earliest possible date lend its further support and co-operation by giving full effect to the substance of the final report.

The filing of the afore-mentioned reports with the Department is, of course, the responsibility of the municipal officials. In addition the auditor of each municipality is required to file a copy of his yearly report. This represents a duplication of work to a certain extent and it is felt that some possible benefits could be obtained, particularly in the case of rural municipalities, by adopting a standard form for the municipal auditor to fill out. Such would contain information similar to that now required by the present Treasurer's Returns as well as other information that should be included in a proper audit report, including the auditor's comments or written report dealing with the matters coming under his inspection.

This would eliminate the necessity of the municipal treasurer filing his return as at the present time, and would certainly tend towards substantial improvement in the standards of municipal auditing as well as standardizing the form of the auditor's reports. It is intended to fully canvas this possibility from the standpoint of its practicability during the coming year, if at all possible.

Reference was made at the outset of this review to the Annual Report of Municipal Statistics for 1937. It is felt desirable at this time to make further reference to this report and the contents thereof.

The report was somewhat delayed again this year beyond the date the 1936 report was released. This delay has been due in part to the difficulty still being experienced in having the returns filed promptly by some municipalities, and in addition it is still difficult to obtain accurate information even through the medium of these returns. Also the report has been materially extended over previous issues, containing roughly about one-third more information, and the extra time involved in this work has in turn tended somewhat to extend the publication date.

Last year the Department, in order to meet demands for information pertaining to municipalities, as soon after the year end as possible, published a preliminary bulletin containing the more salient facts, pending compilation and publication of the completed report. This year it was deemed advisable not to continue this practice, but rather to concentrate on the 1938 report with a view to making it available to the public at an earlier date, if possible before the end of the present year.

The 1937 report reflects a general improvement in the financial position of the 938 municipalities reviewed, in comparison with previous years.

The *Assessed Population increased* from 3,350,139 to 3,377,832 during 1937.

Assessed Values remain approximately the same being $2,919,359,401 for 1936 or $871 per capita, and $2,919,267,023 for 1937 or $864 per capita, a reduction of $92,378 or $7 per capita.

Taxation was *reduced* from $117,887,933 in 1936 when it amounted to $35.19 per capita to $116,504,841 in 1937 when it amounted to $34.52 per capita.

Levies for School Purposes, however, *increased* from $36,251,580 in 1936 when they represented 30.8% of the total levy or $10.82 per capita to $37,944,183 in 1937 when they represented 32.6% of the total levy or $11.23 per capita.

It will be seen from the foregoing that *General Municipal Taxation* (exclusive of School Levies) was *reduced* in 1937 by $3,075,695 or $1.08 per capita as compared with 1936.

Tax Collections, including both current and arrears, show a reduction as between 1936 and 1937, in so far as dollars and cents collected is concerned, due to the reduced levy, being $121,825,930 in 1936 and $120,502,561 in 1937. In relation to population, such collections in 1936 amounted to $36.36 per capita while in 1937 they dropped to $35.67 per capita.

The percentage of total collections to the current levy *increased*, however, from 103.3% collected in 1936 to 103.4% collected in 1937.

Tax Arrears outstanding also show a *decrease* during the year from $47,428,324 at the end of 1936 to $41,932,203 at the end of 1937. The 1936 figure was equivalent to 40.2% of the current levy for that year or $14.16 per capita, whereas the 1937 figure was equivalent to 36.0% of the current levy or $12.41 per capita.

The gross *Debenture Debt* of Ontario municipalities also continued a downward trend being *reduced* from $431,546,483 at the end of 1936 when it represented 14.8% of assessed values or $128.81 per capita. to $425,744,206 at the end of 1937 when it represented 14.6% of assessed values or $126.04 per capita.

This reduction is reported notwithstanding the addition to the unmatured debt through the process of refunding of past due maturities and previously unrefunded debt of defaulting municipalities. It is estimated in this regard that the total addition to the unmatured debt would approximate $15,000,000 which has offset in part the normal debt reduction that would have been experienced, such as in past years of from $20 to $30 millions annually.

Sinking Funds on hand in the municipalities *increased* during the year from $58,294.088 at the end of 1936 to $59.829.018 at the end of 1937, with the result that the *Net Total Debt* was *decreased* from $373.252,395 in 1936 when it represented 12.8% of assessed values or $111.41 per capita to $365.915,188 at the end of 1937 when it represented 12.5% of assessed values or $108.33 per capita.

Comparative figures contained in the opening pages of the Annual Report of Municipal Statistics for 1937 reflects the above improvement according to the different classes or types of municipalities, namely Cities, Towns and Villages, Townships and Counties. In addition figures are also shown in this detail for years prior to 1936 which indicate quite forcibly the extent of the improvement obtained in the financial position of Ontario Municipalities at the close of 1937.

J. H. Lowther,
Municipal Statistician.

March 31st, 1939.

Statement of One Mill Subsidy Paid to Municipalities in Ontario for the Year 1938

COUNTY OR DISTRICT	Cities	Towns	Villages	Townships	Commissions	Total	Cities, Separated Towns, etc., not included in County Administration	Net Subsidy Payments to County Municipalities
1. COUNTIES								
Brant	$26,922.00	$2,617.13	$	$13,122.97	$	$42,662.10	$26,922.00	$15,740.10
Bruce		4,302.90	2,688.39	22,210.07		29,201.36		29,201.36
Carleton	153,300.54	1,240.07	2,885.34	16,760.57		174,186.52	153,300.54	20,885.98
Dufferin		1,839.12	754.74	8,705.22		11,299.08		11,299.08
Elgin	15,076.70	1,335.85	2,441.41	21,662.53		40,516.49	15,076.70	25,439.79
*Essex	93,428.06	14,894.95	723.98	31,410.27		140,457.26	93,895.37	46,561.89
Frontenac	15,715.54		142.94	5,813.34		21,671.82	15,715.54	5,956.28
Grey	8,422.88	3,934.60	1,221.67	21,364.97		34,944.12	8,422.88	26,521.24
Haldimand		1,979.65	1,988.10	11,103.98		15,071.73		15,071.73
Haliburton				1,227.25		1,227.25		1,227.25
Halton		8,085.90	792.25	12,553.54		21,431.69		21,431.69
Hastings	10,224.10	4,007.73	2,301.23	13,783.98		30,317.04	13,680.10	16,636.94
Huron		4,926.61	2,012.32	32,951.73		39,890.66		39,890.66
Kent	14,382.44	6,552.30	1,366.79	28,597.67		50,899.20	14,382.44	36,516.76
Lambton	18,504.24	2,243.86	2,314.16	25,199.88		48,262.14	18,504.24	29,757.90
Lanark		9,836.86	156.68	8,002.53		17,996.07	4,530.99	13,465.08
Leeds & Grenville		10,289.24	2,253.18	14,932.09		27,474.51	10,331.24	17,143.27
Lennox & Addington		1,759.12	266.95	7,020.74		9,046.81		9,046.81
Lincoln	24,882.90	4,373.90	1,703.54	11,995.20		42,955.54	24,882.90	18,072.64
Middlesex	82,139.24	2,037.62	1,122.93	40,559.64		125,859.43	82,139.24	43,720.19
Norfolk		4,100.88	3,214.95	16,783.31		24,099.14		24,099.14
Northumberland & Durbam		9,242.44	1,847.46	20,084.97	155.07	31,329.94	155.07	31,174.87
Ontario	25,978.29	3,224.98	1,580.44	19,015.15		49,798.86	25,978.29	23,820.57
Oxford	7,465.65	5,226.09	1,456.63	24,750.64		38,899.01	10,497.37	28,401.64
Peel		4,891.65	1,962.27	13,046.84		19,900.76		19,900.76
Perth	13,749.10	4,946.43	641.05	25,042.87		44,379.45	16,164.00	28,215.45
Peterborough	21,666.72		1,338.71	8,277.87		31,283.30	21,666.72	9,616.58
Prescott & Russell		2,871.03	506.87	13,958.21		17,336.21		17,336.21
Prince Edward		2,697.89	1,150.41	7,717.68		11,565.98		11,565.98
Renfrew		10,020.21	960.70	9,716.47		20,697.38		20,697.38
Simcoe		20,761.20	2,384.43	26,602.78		49,748.41		49,748.41
Stormont, Dundas & Glengarry		10,685.77	2,597.85	26,721.41		40,005.03		40,005.03
Victoria		4,277.85	1,495.37	11,266.22		17,039.44		17,039.44
Waterloo	37,642.02	12,935.39	1,198.68	16,788.79		68,564.88	37,642.02	30,922.86
Welland	27,395.52	11,810.15	2,734.25	25,582.63		67,522.55	27,395.52	40,127.03
Wellington	13,724.37	2,184.37	3,082.74	23,632.86		42,624.34	13,724.37	28,899.97
Wentworth	164,904.45	3,991.81	1,037.46	19,080.59	1,866.30	190,880.61	163,038.15	27,842.46
York	898,797.00	20,553.90	21,924.16	91,895.71		1,033,170.77	898,797.00	134,373.77
TOTAL FOR COUNTIES	$1,674,321.76	$220,679.45	$78,251.03	$748.943.13	$2,021.37	$2,724,216.74	$1.696,842.69	$1,027,374.05
2. DISTRICTS								
Algoma	$ 19,047.92	$ 1,643.39	$ 60.15	$ 2,951.98		$ 23,703.44		
Cochrane		20,745.63		14,325.01		35,070.64		
Kenora		8,625.22		855.60		9,480.82		
Manitoulin		524.83		1,332.69		1,857.52		
Muskoka		3,595.31	514.47	5,004.67		9,114.45		
Nipissing	9.430.91	2,687.51		2,149.09		14,267.51		
Parry Sound		1,906.26	901.31	2.807.48		5,615.05		
Rainy River		4,640.59		2,011.54		6,652.13		
Sudbury	14,440.42	7,288.41		3,853.65		25,582.48		
Thunder Bay	50,418.07	865.32		4,532.04		55,815.43		
Timiskaming		4,711.34	26.39	25,363.14		30.100.87		
TOTAL FOR DISTRICTS	$ 93.337.32	$ 57,233.81	$ 1,502.32	$ 65,186.89		$ 217,260.34		
GRAND TOTAL	$1,767,659.08	$277,913.26	$79,753.35	$814,130.02	$2,021.37	$2,941,477.08		

* Includes $467.31 for Pelee Twp., which for municipal purposes does not form part of the County Administration.

ANNUAL REPORT

OF THE

Department of Highways

ONTARIO

FOR THE FISCAL YEAR ENDING MARCH 31st
1938

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

SESSIONAL PAPER No. 32, 1939

ONTARIO

TORONTO
Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty
1939

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To The Honourable Albert Matthews, LL.D.,
Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour: —

The undersigned has the honour to transmit the Annual Report of the Department of Highways, Ontario, for the fiscal year ending March 31st, 1938.

Respectfully submitted,

T. B. McQuesten,
Minister.

Department of Highways, Ontario.
Toronto, April 20th, 1939.

To The Honourable T. B. McQuesten, K.C., B.A., LL.B.,
Minister of Highways, Ontario.

Sir: —

I have the honour to present herewith Report on the activities of the Department of Highways for the Fiscal Year ended 31st March, 1938.

The Report covers operations and functions performed by the various branches, including King's Highways, Municipal Roads, Bridge Construction, Accounting, Gasoline Tax and Motor Vehicles.

I have the honour to be, Sir,

Your obedient servant,

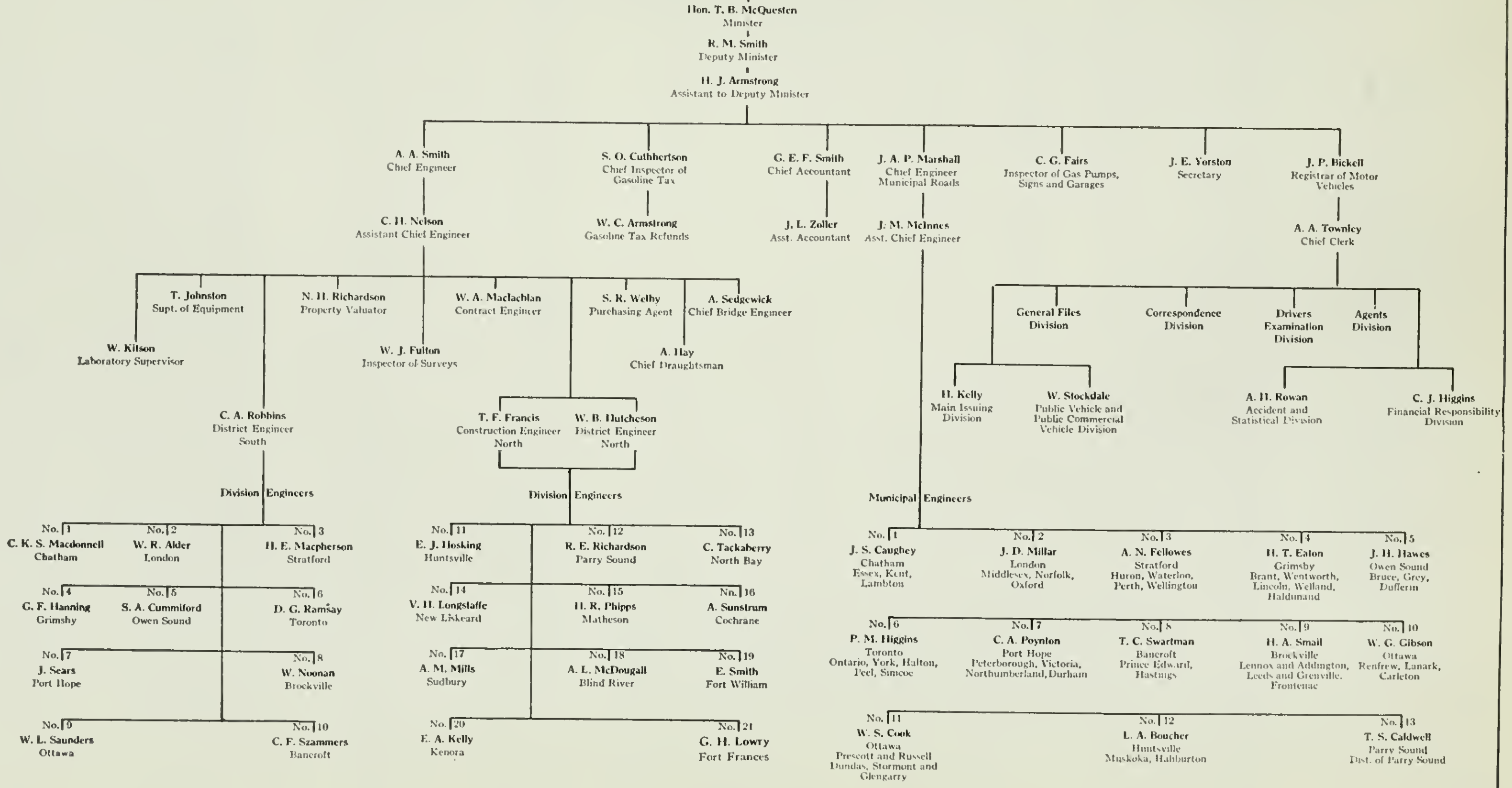
R. M. Smith,
Deputy Minister.

Department of Highways, Ontario.
Toronto, April 20th, 1939.

1937

ORGANIZATION CHART

DEPARTMENT OF HIGHWAYS ONTARIO


Hon. T. B. McQuesten
Minister
R. M. Smith
Deputy Minister
H. J. Armstrong
Assistant to Deputy Minister
A. A. Smith
Chief Engineer
S. O. Cuthbertson
Chief Inspector of Gasoline Tax
G. E. F. Smith
Chief Accountant
J. A. P. Marshall
Chief Engineer Municipal Roads
C. G. Fairs
Inspector of Gas Pumps, Signs and Garages
J. E. Yorston
Secretary
J. P. Bickell
Registrar of Motor Vehicles
C. H. Nelson
Assistant Chief Engineer
W. C. Armstrong
Gasoline Tax Refunds
J. L. Zoller
Asst. Accountant
J. M. McInnes
Asst. Chief Engineer
A. A. Townley
Chief Clerk
T. Johnston
Supt. of Equipment
N. H. Richardson
Property Valuator
W. A. Maclachlan
Contract Engineer
S. R. Welby
Purchasing Agent
A. Sedgewick
Chief Bridge Engineer
W. Kilson
Laboratory Supervisor
W. J. Fulton
Inspector of Surveys
A. Hay
Chief Draughtsman
General Files Division
Correspondence Division
Drivers Examination Division
Agents Division
H. Kelly
Main Issuing Division
W. Stockdale
Public Vehicle and Public Commercial Vehicle Division
A. H. Rowan
Accident and Statistical Division
C. J. Higgins
Financial Responsibility Division
C. A. Robbins
District Engineer South
T. F. Francis
Construction Engineer North
W. B. Hutcheson
District Engineer North
Division Engineers
No. 1
C. K. S. Macdonnell
Chatham
No. 2
W. R. Alder
London
No. 3
H. E. Macpherson
Stratford
No. 4
G. F. Hanning
Grimsby
No. 5
S. A. Cummiford
Owen Sound
No. 6
D. G. Ramsay
Toronto
No. 7
J. Sears
Port Hope
No. 8
W. Noonan
Brockville
No. 9
W. L. Saunders
Ottawa
No. 10
C. F. Szammers
Bancroft
Division Engineers
No. 11
E. J. Hosking
Huntsville
No. 12
R. E. Richardson
Parry Sound
No. 13
C. Tackaberry
North Bay
No. 14
V. H. Longstaffe
New Liskeard
No. 15
H. R. Phipps
Matheson
No. 16
A. Sunstrum
Cochrane
No. 17
A. M. Mills
Sudbury
No. 18
A. L. McDougall
Blind River
No. 19
E. Smith
Fort William
No. 20
E. A. Kelly
Kenora
No. 21
G. H. Lowry
Fort Frances
Municipal Engineers
No. 1
J. S. Caughey
Chatham
Essex, Kent, Lambton
No. 2
J. D. Millar
London
Middlesex, Norfolk, Oxford
No. 3
A. N. Fellowes
Stratford
Huron, Waterloo, Perth, Wellington
No. 4
H. T. Eaton
Grimsby
Brant, Wentworth, Lincoln, Welland, Haldimand
No. 5
J. H. Hawes
Owen Sound
Bruce, Grey, Dufferin
No. 6
P. M. Higgins
Toronto
Ontario, York, Halton, Peel, Simcoe
No. 7
C. A. Poynton
Port Hope
Peterborough, Victoria, Northumberland, Durham
No. 8
T. C. Swartman
Bancroft
Prince Edward, Hastings
No. 9
H. A. Small
Brockville
Lennox and Addington, Leeds and Grenville, Frontenac
No. 10
W. G. Gibson
Ottawa
Renfrew, Lanark, Carleton
No. 11
W. S. Cook
Ottawa
Prescott and Russell
Dundas, Stormont and Glengarry
No. 12
L. A. Boucher
Huntsville
Muskoka, Haliburton
No. 13
T. S. Caldwell
Parry Sound
Dist. of Parry Sound

ONTARIO AND ITS HIGHWAYS

By R. M. Smith, Deputy Minister

On April 1st, 1937, the beginning of the fiscal twelve months covered by this report, the amalgamation of the Department of Highways and the former Department of Northern Development became officially effective. This amalgamation has made a unit of the highway work in the Province which was impossible which under two separate administrations, and which has resulted in uniform methods being adopted and has worked out to the advantage of both Northern and Southern Ontario, since a higher standard of construction and maintenance applies throughout the Province as a whole.

A large construction programme was carried out on King's Highways and other roads administered by the Department. In the development of the modern "Divided Highway," Ontario is making a start. This new type of highway not only gives a means of rapid transit over long distances but provides this with a degree of safety not possible in any other type of highway heretofore developed. To this was added extensive experiments in highway lighting, traffic actuated signals, cloverleaf grade separations, and other safety devices.

Routes and approaches to two new international bridges were undertaken, one at Point Edward, connecting with the State of Michigan at Port Huron across the St. Clair River; and the other at Ivy Lea, between Gananoque and Brockville, crossing the St. Lawrence River to New York State via the scenic Thousand Islands.

Northern Ontario received a large share of attention this year, many sections of main highways being realigned to a much improved standard and substantial progress made in carrying forward the extensive paving programme recently inaugurated.

The Department acknowledges the splendid co-operation of officials of counties, townships and suburban road commissions with the Municipal Roads Branch. Increases in subsidies to townships working under the Highway Improvement Act became effective.

In the Motor Vehicles Branch, reduced rates of fees, effective this year, resulted in approximately $2,000,000.00 less revenue than for the previous year, a reduction which would have been much more had there not been new high figures reached in all classes of motor vehicle registrations. This revenue decrease was largely offset by an increase of just under $2,000,000.00 in gasoline tax.

Motor vehicle accidents, unfortunately, remain a matter of the gravest concern to the Department.

In comparing expenditure figures of the Department for this year with those of prior years, it is necessary to include the expenditures of the former Department of Northern Development for prior years to obtain a true comparison

REPORT OF THE HIGHWAYS ACCOUNTANT

By G. E. F. Smith, Chief Accountant

To R. M. Smith, Esq.,
Deputy Minister of Highways,

The following is a summary of the Net Expenditure and Revenue for the fiscal year, April 1st, 1937, to March 31st, 1938:

Expenditure

King's Highways	$ 31,662,946.27
Secondary Trunk Roads, etc	5,252,160.47
Grants to Counties	2,031,372.49
Grants to Townships	2,289,499.65
Connecting Links, etc	490,081.34
Administration Equipment, etc	1,976,806.21
	$ 43,702,866.43

Revenue

Gasoline Tax	$ 17,650,680.85
Motor Vehicles	8,767,689.24
Road Assessments	514,983.69
Permits, Garages, Signs, etc	90,437.90
Interest	17,940.54
Miscellaneous Sales	15,048.99
Sundries	81,481.34
	$ 27,138,262.55

As in previous years the books of the Municipalities accepting aid under the Highway Improvement Act were audited by the Accounting Department.

REPORT OF GASOLINE TAX REVENUE

By S. O. Cuthbertson, Chief Inspector, Gasoline Handling Act

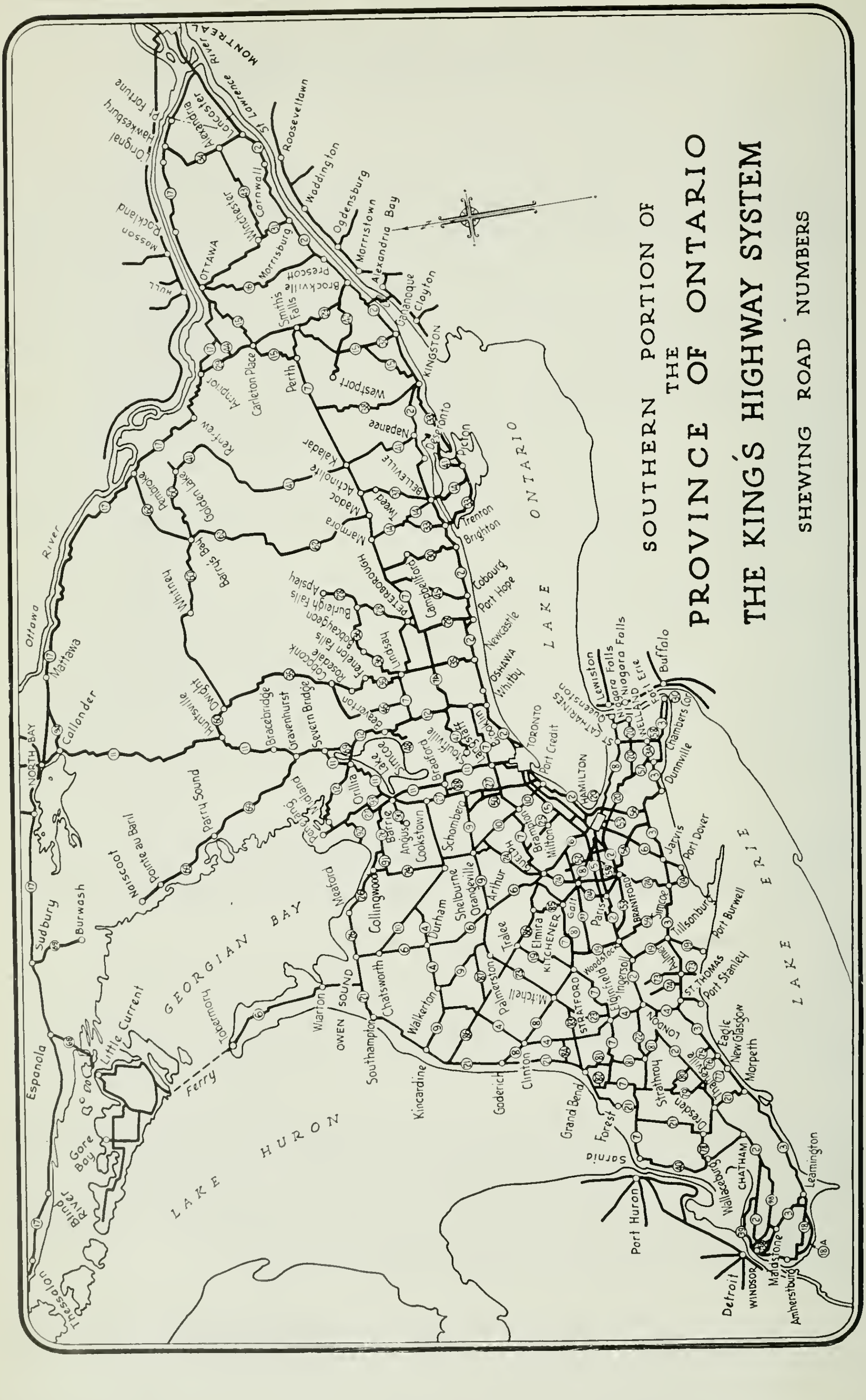
Mr. R. M. Smith,
Deputy Minister of Highways,

The gross gasoline tax collections for the fiscal year of the Province of Ontario from April 1, 1937, to March 31, 1938 (both dates inclusive), amounted to $19,253,179.05.

For this same period, there were 55,048 claims for refund of gasoline tax dealt with in the Department. The amount refunded during the above mentioned period to farmers, manufacturers, aeroplane users, etc., was $1,609,014.58.

The net gasoline revenue for the above mentioned period after having paid the aforementioned refunds amounted to $17,644,164.47. The rate of taxation in the Province of Ontario is six cents per imperial gallon.

S. O. Cuthbertson,
Chief Inspector Gasoline Tax.

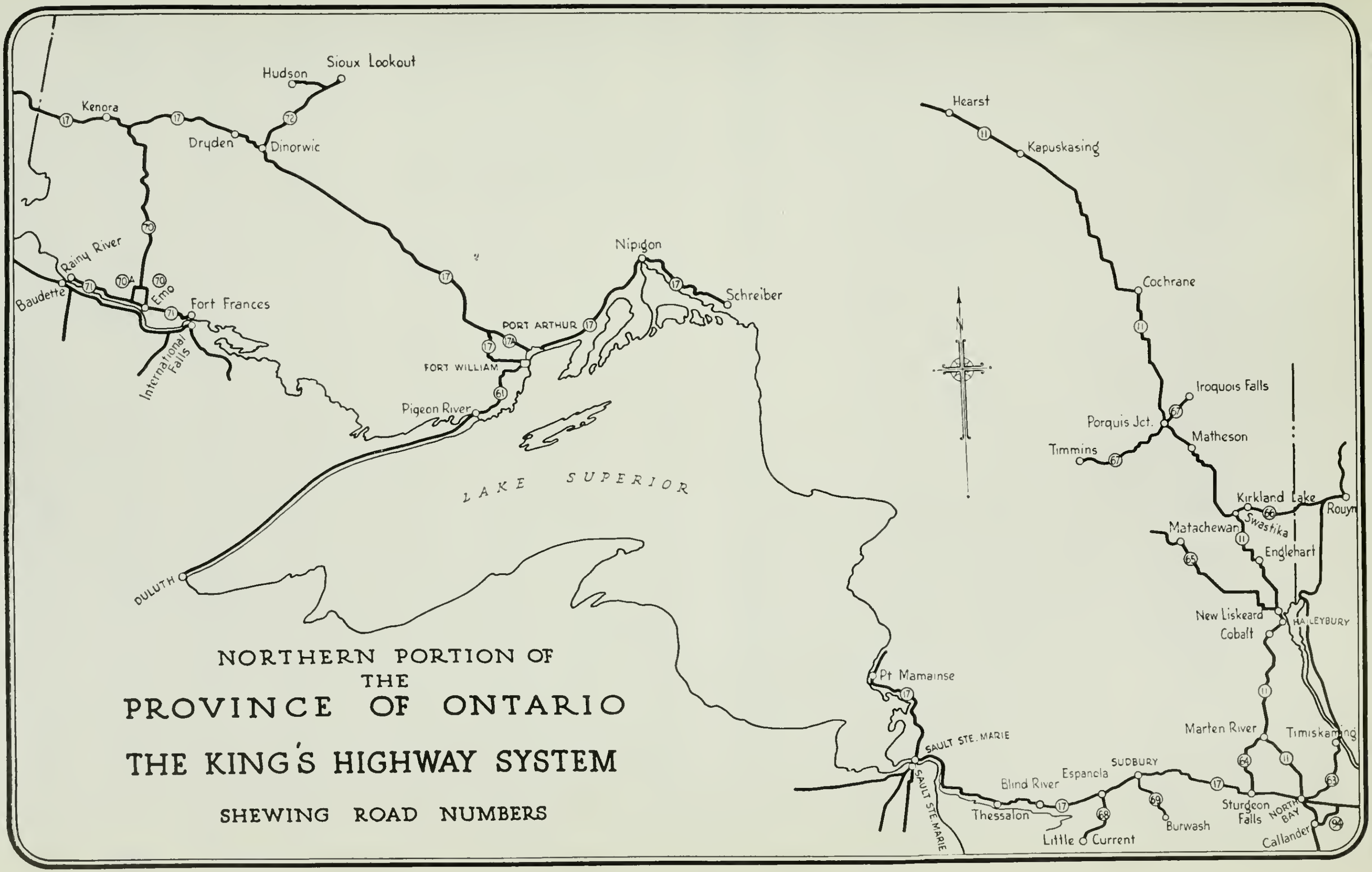


SOUTHERN PORTION OF THE PROVINCE OF ONTARIO

THE KING'S HIGHWAY SYSTEM

SHEWING ROAD NUMBERS

MONTREAL
St. Lawrence River
L'Orignal
Hawkesbury
Pt. Fortune
Alexandria
Lancaster
Roosevelttown
Cornwall
Winchester
Waddington
Ogdensburg
Morrisburg
Prescott
Brockville
Morristown
Alexandria Bay
Gananoque
Clayton
KINGSTON
OTTAWA
Hull
Masson
Rockland
Smiths Falls
Carleton Place
Perth
Westport
Arnprior
Renfrew
Pembroke
Golden Lake
Kaladar
Napanee
Deseronto
Picton
BELLEVILLE
Actinolite
Madoc
Tweed
Trenton
Brighton
Marmora
Barrys Bay
Whitney
Ottawa River
Mattawa
Campbellford
PETERBOROUGH
Apsley
Burleigh Falls
Bobcaygeon
Fenelon Falls
Rosedale
Coboconk
Lindsay
Cobourg
Port Hope
Newcastle
OSHAWA
Whitby
LAKE ONTARIO
Dwight
Huntsville
Bracebridge
Gravenhurst
Severn Bridge
Beaverton
Orillia
Lake Simcoe
Bradford
Stouffville
Brooklin
TORONTO
Port Credit
Queenston
Lewiston
Niagara Falls
ST CATHARINES
WELLAND
Fort Erie
Buffalo
Chambers Cor.
Dunnville
HAMILTON
NORTH BAY
Callander
Parry Sound
Penetang
Midland
Barrie
Angus
Cookstown
Schomberg
Brampton
Milton
GUELPH
Galt
Paris
BRANTFORD
Jarvis
Port Dover
Simcoe
Tillsonburg
Port Burwell
Port Stanley
ST. THOMAS
Aylmer
Ingersoll
Woodstock
KITCHENER
Elmira
Arthur
Orangeville
Shelburne
Durham
Collingwood
Meaford
Chatsworth
OWEN SOUND
Wiarton
Southampton
Walkerton
Kincardine
Palmerston
Mitchell
STRATFORD
LONDON
Strathroy
Goderich
Clinton
Grand Bend
Forest
Sarnia
Port Huron
Dresden
Thamesville
Wallaceburg
CHATHAM
Eagle
New Glasgow
Morpeth
Leamington
Windsor
Detroit
Maidstone
Amherstburg
LAKE ERIE
LAKE HURON
GEORGIAN BAY
Sudbury
Burwash
Noganosh
Pointe au Baril
Espanola
Little Current
Tobermory
Ferry
Gore Bay
Blind River
Thessalon



NORTHERN PORTION OF
THE
PROVINCE OF ONTARIO
THE KING'S HIGHWAY SYSTEM
SHEWING ROAD NUMBERS

Sioux Lookout
Hudson
Kenora
Dryden
Dinorwic
Rainy River
Baudette
Emo
Fort Frances
International Falls
Nipigon
Schreiber
PORT ARTHUR
FORT WILLIAM
Pigeon River
LAKE SUPERIOR
DULUTH
Hearst
Kapuskasing
Cochrane
Iroquois Falls
Porquis Jct.
Matheson
Timmins
N
Kirkland Lake
Swastika
Rouyn
Matachewan
Englehart
New Liskeard
HAILEYBURY
Cobalt
Pt Mamainse
SAULT STE. MARIE
SAULT STE. MARIE
Marten River
Timiskaming
SUDBURY
Espanola
Blind River
Thessalon
Little Current
Burwash
Sturgeon Falls
NORTH BAY
Callander
17
72
70
70A
71
17A
61
11
67
66
65
64
63
68
69
94

ANNUAL REPORT FOR 1937

KING'S HIGHWAY OPERATIONS

A. A. Smith, Chief Engineer

The entire King's Highway System in both Northern and Southern Ontario was maintained in an excellent state of repair. Considerable expenditure was made in improving road numbering and signing with an increased use of reflector signs of various types. Stress was laid on making our roads all over the Province more safe for traffic by widening and generally improving the cross sections, increasing the visibility on curves and crests of hills and eliminating danger points by correcting the alignment. An effort was made to eliminate deep ditches or move them off the road entirely.

There were either started or completed five overhead structures, ten subways, each eliminating a level railway crossing; four revisions to eliminate eight railway crossings; and bell and wig-wag protection was installed at twelve level railway crossings.

Dust layers were applied more extensively than heretofore, and in fact nearly all of the Provincial Highways that are not paved were thus treated.

During the Autumn and Winter the Department made some investigation in the various methods of road lighting. Consideration was given to various forms of light source, such as incandescent lamps, mercury vapor and sodium vapor. The alternative use of overhead or underground conductors and spacing of units were other points considered. Lighting was installed at the bridges and cloverleaves on the new Middle Road and work was commenced on the lighting of a 4 mile stretch of this road. The installation of traffic actuated signals at important intersections was continued. Stress was laid on making our roads safer by improving the cross sections, increasing visibility and eliminating danger points by correcting the alignment.

In Western Ontario many miles of hard surfaced roads were completed and a new bridge connection with the United States at Point Edward was started. This bridge is being built under an agreement with the State of Michigan. Western Ontario suffered from severe floods in the Spring and the Department lost a good many structures which had to be replaced during the year. The construction of divided motor ways were started in Western Ontario, South of Windsor, West of Chatham, East of Woodstock and between Galt and Kitchener.

In Central Ontario many miles of hard surfaced roads were completed. Divided motor ways, Toronto to Burlington and Toronto Easterly six miles, were paved. The first Clover-leaf in Canada was built on the Middle Road near Port Credit and a half Clover-leaf at Burlington was opened to traffic. A divided motor way was put in service between Hamilton and Dundas. The grading for a new similar highway from Burlington to Niagara Falls, to Fort Erie, was proceeded with and was completed to a considerable distance East of Grimsby.

A traffic census was taken in the fall of this year to ascertain the actual flow of traffic over the new Middle Road, Lake Shore Road and Dundas Street.

In Eastern Ontario the paving programme was proceeded with in an extensive manner. The new Scenic divided route, along the St. Lawrence River, between Gananoque and Brockville, was partially graded and it is hoped that this work will be far enough advanced to give suitable access to the new International Bridge, which is being constructed across the St. Lawrence River at Ivy Lea. This new road will provide one of the finest scenic routes in Ontario, giving a splendid view of the Thousand Islands.

In Northern Ontario, a commencement was made on the reconstruction of various sections of Highways Nos. 11 and 17 to a Class "A" standard. Concrete pavement was laid on the completed portions between Trout Creek and Powassan, North Bay and Sturgeon Falls, and, also, West of Blind River and East of Sault Ste Marie; and a black base surfacing was commenced on the section between New Liskeard and Englehart.

Construction was also commenced on the new highway between Matheson and Timmins which, when completed, will reduce the distance by road between these two points by sixteen miles. Concrete pavement was contracted for between Pamour Mine and Timmins, and three miles completed before the end of the season.

Several bridges, replacing old obsolete structures, were started; the most notable of these being the Keewatin Channel bridge, Burk's Falls bridge, and also the bridge at Frog Rapids, in the vicinity of Sioux Lookout.

In the Divisions West of the Lakehead Cities, a black base pavement was laid on Arthur Street West of Fort William, and also on a portion of the highway between Kenora and the Manitoba boundary; also grading operations were carried out on the Dawson Road West of Arthur Street, and on the main road between Fort Frances and Emo in the Rainy River Division.

Surveys Branch

During 1937, land plans were made of 619 miles of widened highways. This mileage was also monumented with the standard concrete monuments and rock posts. In addition to the land surveys five parties were employed on location work.

These Location Parties located 130 miles of road, which were constructed during 1937 and 160 miles of road which were located but not constructed.

The located roads which were constructed are as follows: Fenelon Falls-Kinmount, Brown's Line-Toronto, Englehart North, New Liskeard-Earlton, Burleigh Falls-Buckhorn, Elmvale-Wasaga, Highland Creek East, Temagami North and South, Wellandport-Beckett's Bridge.

Study plans showing projected locations were made between the following points: Temagami South, Kleinburg North, Eglinton Avenue East and West, Trenton to Belleville, Bobcaygeon to No. 7, Springville North, Beaverton-Port Bolster, Burlington Beach, Freeman and Dundas, Preston-Kitchener, Sudbury-Levack, Queen St.-Dundas St., Dunbarton-Newcastle, Kitchener Diversion, Sudbury to Vermillion Road and Caledonia to Cayuga, Caledonia to Cainsville.

In addition to the above, accident and condition surveys were made for the Provincial Police, the Department of Public Works and the Department of Game and Fisheries.

DIVISION No. 1 — CHATHAM

Highway No. 2

From Chatham East to Louisville about 4 miles of old concrete was resurfaced with a bituminous cold laid surface. West from Chatham 6 miles of divided highway was graded, culvert extension constructed and sewers laid to put the road in shape for paving the second roadway, two bridges were also erected in this section.

At St. Joachim 4 miles of Municipal ditches were moved and the road graded and drainage installed for a dual highway.

Highway No. 3

A grade revision and realignment about six tenths of a mile east from New Glasgow eliminated a danger spot on this highway. Four miles of old concrete pavement between Essex and Maidstone were resurfaced with cold laid bituminous material.

From Maidstone west to Howard Avenue 6 miles of divided highway grading was done and culverts constructed. Some concrete pavement was laid between Howard Avenue and the Huron Line, this is on the second roadway.

One mile of concrete pavement was laid through Arkona and also one mile in the village of Thedford.

Aux Sables River Bridge was repaired after a spring freshet and the approaches elevated as a further protection against high water.

Over 5 miles of concrete pavement were laid south from Forest towards No. 7 Highway.

Sodium lighting—Middle Road—West of Etobicoke bridge.

Rock cut and fill south of Powassan, Highway No. 11.

Highway No. 21

A 9 mile section from Ridgetown to Thamesville was paved with concrete, making the concrete pavement continuous from Morpeth to Highway No. 7.

Highway No. 40

About 13 miles of concrete pavement were laid from Wallaceburg through Port Lambton to a point one and one half miles north of Sombra, also 5 miles of concrete between Froomfield and Sarnia. Concrete sidewalks were laid in Port Lambton, Sombra, Courtright and Froomfield.

Over three and one half miles of concrete pavement were laid between Wallacetown and Dutton and about the same between Eagle and West Lorne after these sections were regraded and drainage installed.

A 60 foot concrete bridge was built four miles south of Watford and a half mile of grading done in the vicinity of the bridge.

International Bridge — Point Edward

Concrete foundations and piers for the approach span were constructed and about 85% of the steel erected. The approach and Plaza area for the customs and immigration buildings was graded and drainage installed.

Eleven miles of bituminous roads were surface treated, and all gravel roads given an application of bituminous dust layer. All roads on this division were kept open.

Division No. 2 — London

Highway No. 2

Concrete was laid from Woodstock Easterly 2.9 miles on the north side of the old road with a centre boulevard between the two pavements.

Considerable re-surfacing was done between the city of London and the village of Thamesford.

Highway No. 19

Nine and three quarter miles of penetration macadam with a water bound macadam base were laid through Port Burwell and north from Lake Erie.

Highway No. 53

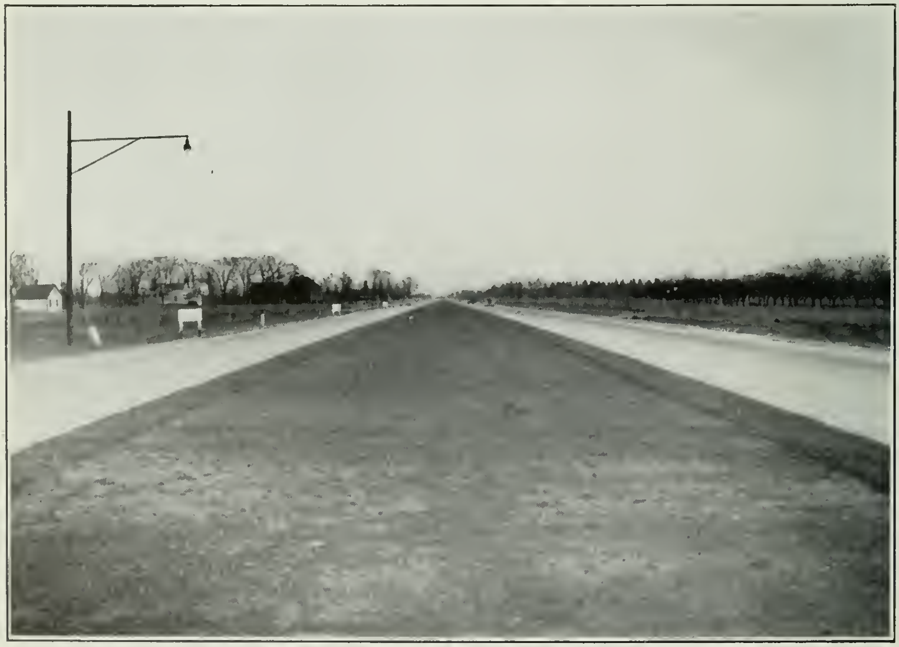
Over 7 miles of concrete pavement was laid from Burford westerly towards Eastwood.

Concrete pavement was laid from the village of Delaware to Mount Brydges and the existing pavement in Mount Brydges widened.

About 2 miles of concrete pavement 10 feet in width were laid north and south of Aylmer, this will be widened to 20 feet in 1938.

Between the village of Ailsa Craig and the town of Parkhill, 4 miles of 10 foot concrete pavement were laid.

To replace bridges destroyed by floods early in the season, four reinforced concrete bridges were erected, one over Otter Creek in Tillsonburg, one over the same creek in Vienna, one over Catfish Creek at New Sarum and over the



Looking toward Burlington Beach from Clover Leaf Bridge, Middle Road.

Rock cut and curve, south of Latchford, Highway No. 11.

Sydenham River in Strathroy. Construction was started on another bridge in Vienna, also some work was done on the footings for a double leaf deck bascule bridge over Kettle Creek in Port Stanley.

Twenty-nine miles of stone roads were surface treated and all gravel roads were given an application either of oil dust layer or calcium chloride. All roads on the division were kept open for winter traffic.

DIVISION NO. 3 — STRATFORD

Highway No. 4

Over 7 miles of concrete pavement were laid from the Maitland River Bridge, just south of Wingham southerly to connect with the pavement north of Blyth. The connecting link in the Town of Wingham was resurfaced with a cold laid bituminous pavement.

Highway Nos. 7 and 8

About 2 miles of old concrete pavement was resurfaced with a bituminous surface near Shakespeare.

Highway No. 8

From Galt to Preston and between Preston and Freeport a concrete paving contract was under way, widening the existing pavement to forty feet and laying a divided highway with boulevard where possible. In the carrying out of this work the Grand River Railway tracks were removed from the highway between Galt and Preston to a new right-of-way, the grading and ballasting required being done by the Highway Department.

From Centreville to the south limits of Kitchener a new road was graded on the south side of the Grand River Railway tracks.

Highway No. 19

A concrete rigid frame bridge was built a quarter of a mile north of Woodstock over the south branch of the Thames River.

Between Stratford and Milverton 11 miles of 10 foot concrete pavement was laid.

Highway No. 21

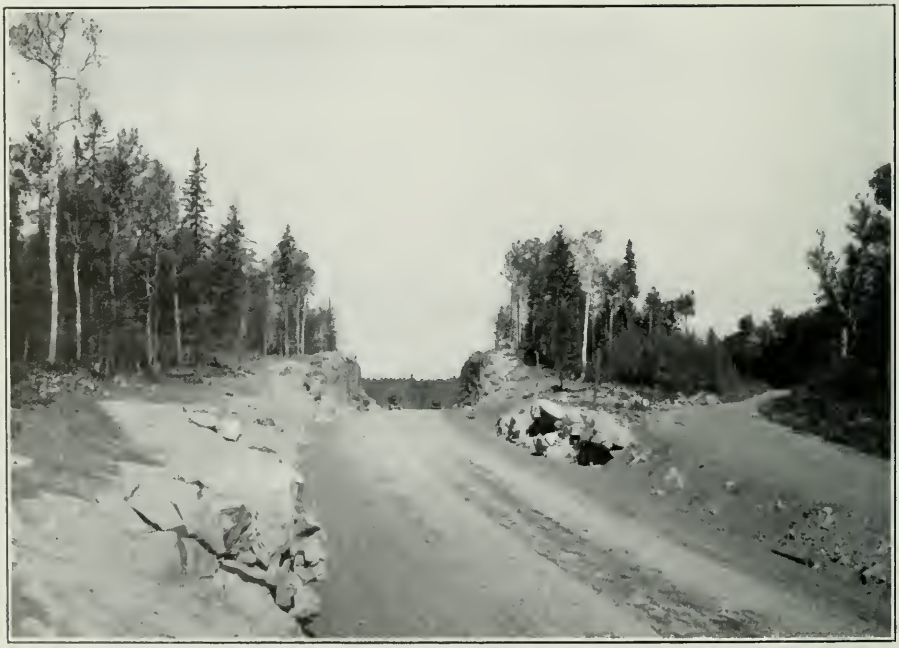
From Drysdale to Grand Bend 10.6 miles of premix gravel retread were laid on the Blue Water Highway.

Between Sheppardton and Amberley five culverts were constructed and the grading of the approaches partially completed.

Between Mitchell and Elginfield four rigid frame concrete bridges and twenty concrete culverts were built.

A contract was awarded between Waterloo and Elmira to widen 3 miles of sixteen foot concrete pavement to twenty feet and for resurfacing with 3″ asphaltic top and also for the paving of three diversions with concrete. The paving of the diversions was completed and part of the other work.

All gravel roads on the diversion were treated either with oil dust layer or calcium chloride, considerable gravel was crushed and placed on the road or in stock piles. About 72% of the road mileage was kept open continuously for winter traffic.



Looking north toward rock cut, north of James Lake, Highway No. 11.

LIGHTING OF CLOVERLEAF — MIDDLE ROAD

DIVISION NO. 4 — GRIMSBY

New Middle Road — Oakville to Niagara Falls

Concrete pavement consisting of two twenty-foot lanes with thirty foot boulevard was laid from the 7th line Trafalgar Township to the Guelph Line, a distance of nine and one half miles; where bridges were encountered the two lanes converged to a forty foot pavement. The shoulders were covered with three inches of crushed stone for a width of nine feet and the ditches constructed wide and shallow to minimize the accident hazard.

The legs of the Burlington Clover Leaf were paved and a divided highway paved from the clover leaf to a few hundred feet south of Highway No. 2, where a single twenty foot pavement across Brant's Pond was built. Considerable area improvement was done at the Clover Leaf, lighting was installed and also an amber flash light erected.

On Brant's Pond filled in the previous year, a considerable amount of top soil was placed on the sand fill, levelled off and seeded.

A traffic circle was started at Stoney Creek, designed to separate traffic for the intersection of Highway No. 20 and the New Niagara Highway in conjunction with the Canadian National Railway.

Grading operations were carried on from Highway No. 20 to Jordan Harbour on the new divided motorway immediately south of Lake Ontario and also from Jordan Harbour to Martindale Road, the clearing was completed and the culverts built and also the offtake ditching from the culverts. This section is being graded to allow for a 30′ centre boulevard and 10′ shoulders about 70% of the grading was completed and several bridges built in the town of Grimsby. The muck in Fifteen and Sixteen Mile Creeks was removed ahead of the fill by dynamiting and the fill placed from one bank to the other on solid bottom. East of St. Catharines, the line was cleared and culverts built as far as Homer. A subway under the Canadian National Railway between Homer and Stamford was constructed.

Highway No. 56

Between Binbrook and Blackheath three and one half miles of mixed macadam were laid, this work was completed with the exception of the 1″ top course.

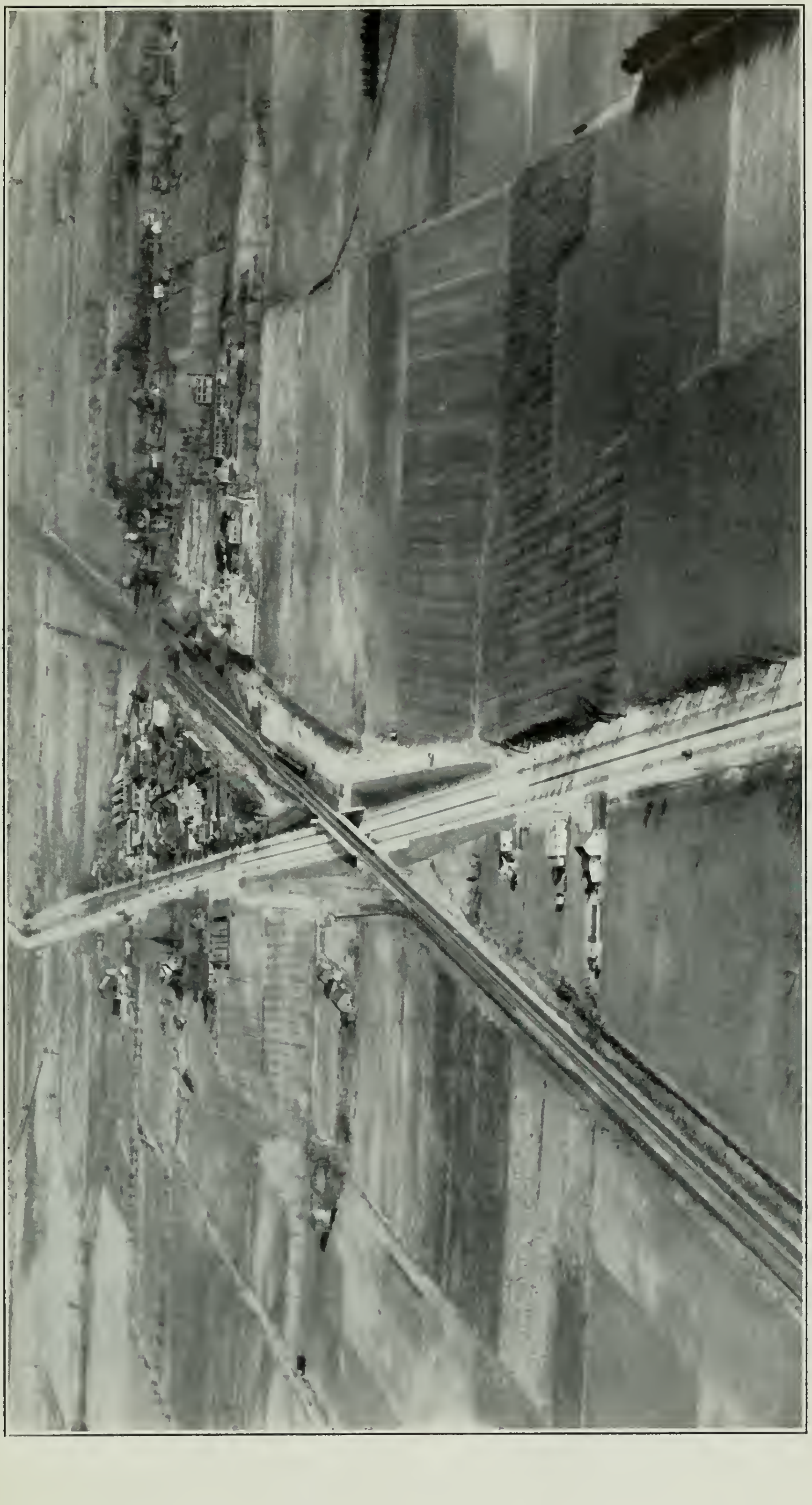
An important cut-off from west Hamilton to Dundas was paved with mixed macadam, this pavement was built in two twenty-foot lanes separated by a twenty-foot boulevard. Three miles of mixed macadam was laid from Clappison's Corner to Millgrove. At Ancaster village the old twenty foot pavement was widened to thirty-eight feet and the whole width covered with a 1″ asphaltic concrete top.

Dangerous curves and severe grades have been eliminated by completion of six miles of grading from Wellandport to Beckitt's Bridge.

Sixteen miles of stone road were surface treated and considerable patching was done on Highway No. 2 between Oakville and Burlington. All roads on the division were kept open for winter traffic.

Road Lighting

Incandescent road lighting was installed at a Cloverleaf and two bridges and one subway on the Middle Road. Traffic actuated signals were installed at three points on the Middle Road.



BURLINGTON SUBWAY ON DIVIDED MOTORWAY — TORONTO TO HAMILTON

Division No. 5 — Owen Sound

Highway No. 9

Grading and culverts from five miles west of Schomberg westerly a distance of eight and one half miles was completed, some grading was also done between Cookstown and Alliston.

Highway No. 10

North of Berkely, six miles of concrete pavement were laid and the grading completed from the north end of the pavement to Chatsworth a distance of four and three-quarter miles.

Highway No. 4

The Walkerton Bridge was completed and opened to traffic.

Highway No. 21

From Kincardine to within a half mile of Tiverton a three-inch plant-mix retread was laid. A similar surface was laid on Southampton Loop with the exception of a diversion at the East end, two miles were also laid between Southampton and Elsinore.

From Springmount westerly seven-tenths of a mile of ten-foot concrete was improved by widening and surfacing with mixed macadam. Between Jackson and Allenford over two miles of mixed macadam was laid.

On Highway No. 26 a diversion at the eastern entrance to Meaford was graded and paved with penetration macadam.

Thirteen miles of road was surface treated, all gravel roads were treated with oil dust layer or calcium chloride. During the winter 95 per cent of the roads on the division were kept open for winter traffic.

Rock cut, north of James Lake, Highway No. 11.

The Middle Road looking east, east of Bronte Bridge.

DIVISION NO. 6 — TORONTO

Highway No. 2

6.3 miles of twenty-foot concrete pavement was laid between the Cenotaph and Highland Creek. This completed the paving of a divided highway between these two points. About 6 miles of storm sewer was installed and considerable curb and gutter constructed.

The grading was partially completed between Highland Creek and the Rouge River.

Whitby to Oshawa was resurfaced with one inch of laid cold asphaltic surface.

From Toronto westerly to New Toronto 3.45 miles, the old concrete pavement on the south side of the road was resurfaced with an asphaltic concrete binder and trap rock top course and curb and gutter installed.

Highway No. 5

From Toronto city limits to the Humber River Bridge, the existing asphaltic concrete pavement was widened to fifty feet and the whole area resurfaced with trap rock asphaltic concrete and concrete curb and gutter installed on both sides. Some work was also done west of the Humber River Bridge.

Highway No. 7

Between Green River and Langstaff several miles at various locations were resurfaced with penetration macadam, some storm sewer was installed, 1.4 miles of widened shoulders constructed and new fence erected.

Highway No. 10

A Cloverleaf was built at the intersection of the Middle Road and No. 10 Highway, the following work being done on No. 10 Highway. One fifth of a mile 40 foot concrete pavement was laid and the required connecting legs paved twenty feet wide; some storm sewer was installed, also curb and gutter. An overhead bridge was erected over the Middle Road.

From Brampton south the road was resurfaced for one mile with cold laid bituminous material.

Highway No. 11

Revision of the alignment and grade of the road at Fennel's Corners was partially completed, eliminating several bad curves and some waterbound macadam base was laid.

South from Barrie about three miles of bituminous pavement was retopped.

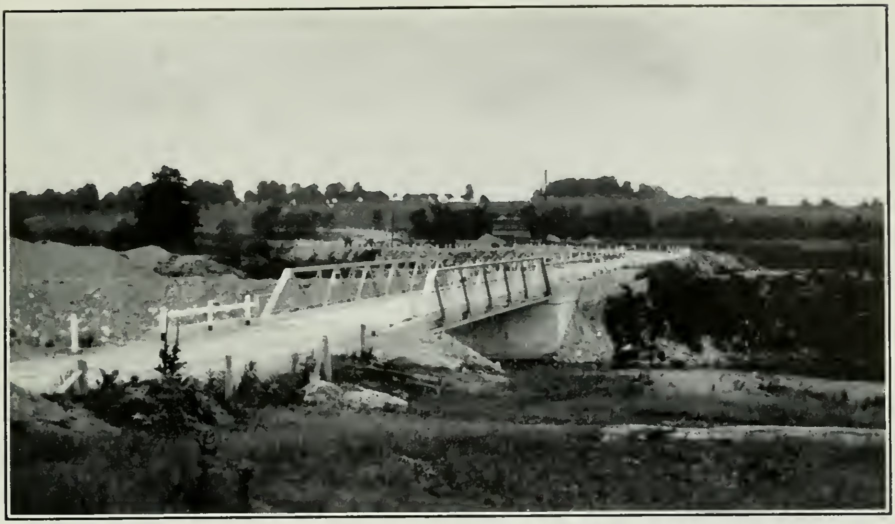
Highway No. 12

Between Atherley and Brechin eleven and one half miles of concrete pavement was laid and the shoulder widening completed. Considerable storm sewer was installed and fencing erected to the new right-of-way limits.

Grading operations were carried on between Warminster and Orillia, about six miles being completed.

Between Waubaushene and Victoria Harbour, one bridge and nine culverts were built and two miles of grading completed. Concrete culverts were constructed between Victoria Harbour and Port McNicholl.

Clover Leaf Bridge looking east, Middle Road.



New bridge and diversion of south branch of Thames River, near Beachville, County of Oxford, on boundary between Township of North Oxford and West Oxford.

Highway No. 27

From Malton Road northerly through the village of Kleinburg, new fence was erected, forty culverts and two concrete bridges were completed and three concrete bridges partially completed. Seven miles of grading was finished and the new grade surfaced with crushed stone.

South from Allandale six miles of concrete pavement was laid and the shouldering and ditching completed.

Bolton southerly four miles was paved with penetration macadam top course. This was laid on a gravel base course, some storm sewer was installed and the slopes of the big cut south of Bolton were sodded.

Between Elmvale and Wasaga Beach eight new culverts were built, four extended and fencing erected preparatory tc starting grading operations.

Middle Road

From Hurontario Street to Oakville two twenty-foot strips of concrete pavement were laid for the entire distance of slightly over eight and one half miles, some storm sewer was installed and considerable area improvement carried out.

On this division 24 miles of road was surface treated, all gravel roads were treated with dust layer. All the highways were kept open for winter traffic.

Road Lighting

Road lighting was installed at one cloverleaf and on two bridges, one of the latter being sodium vapor, and the balance incandescent. Traffic actuated signals were installed at two points on Middle Road.

Division No. 7 — Port Hope

Highway No. 2

The construction of one and a quarter miles of divided highway east of Belleville started in 1936 was completed insofar as the grading and culverts. A grading contract was awarded between the above work and Belleville East Limits, but very little progress was made.

Highway No. 7

From Peterboro easterly seven miles of concrete pavement was laid. Slightly over four miles of mixed macadam was laid between Lindsay and Hindland and the alignment greatly improved.

Stone was crushed and placed on the road and in stock piles between Actinolite and Madoc.

Highway No. 14

Penetration macadam was laid at Stirling and from Stirling to Harold and considerable base course between Harold and Marmora.

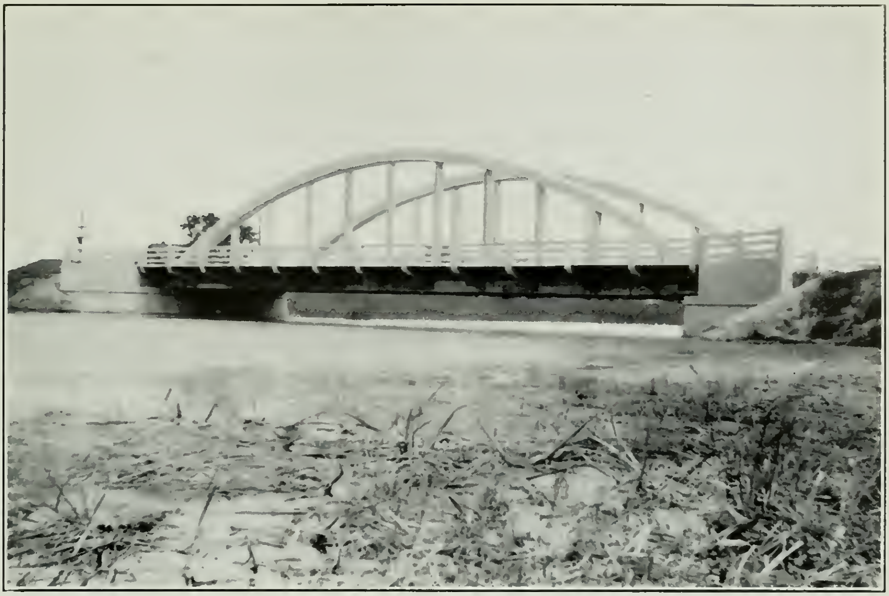
Highway No. 28

Grading operations were completed between Lakefield and Burleigh Falls, considerable rock was crushed and placed on road and stock piled between Burleigh Falls and Apsley.

Highway No. 30

Penetration macadam pavement started in 1936 was completed south from Campbellford for six miles. Grading was completed, a gravel base course laid for a mixed macadam pavement to be laid later from Warkworth side road south for seven miles.

Dual Highway — one mile west of Brockville, looking east.



Bridge over River Canard at Loiselleville, Essex County, Road No. 20. Built in 1937; 120-foot span.

Crushed stone was placed on the road from Havelock south to Campbellford and also north from Brighton.

A concrete bridge was built at Myersburg diversion, Orland Bridge was rebuilt owing to unsafe condition of the old structure.

Highway No. 33

Penetration macadam pavement was laid from Picton to Glenora. A concrete pavement contract was awarded between Carrying Place and Consecon, but only the rough grading and culvert construction was completed.

Highway No. 35

The grading contract awarded in 1936 between Fenelon Falls and Rosedale was completed.

A rock cut was taken out at the south entrance of Coboconk, greatly improving the alignment and grade. Surplus rock from the cut was crushed and placed on the road or stock piled.

Grading was started between Cameron and Fenelon Falls preparatory to laying a mixed macadam pavement.

Highway No. 36

A retread surface was laid on unpaved sections between Lindsay and Bobcaygeon, completing the hard surface between the two places.

The old bridge across Emily Creek was replaced.

Grading operations were started between Burleigh Falls and Buckhorn.

The substructure was completed on a new bridge at Tweed and the superstructure erected, leaving only the floor and approaches to complete.

On this division 22 miles of stone road was surface treated and all gravel roads were treated with oil dust layer or calcium chloride. Most of the Highway mileage was kept open for winter traffic.

Division No. 8 — Brockville

Highway No. 2

Four miles of divided motorway west from Brockville which was under construction in 1936 was completed and paved with concrete.

A concrete bridge to replace the only masonry arch at Cataraqui was started. The pavement from Cataraqui to Kingston and from the LaSalle Causeway to the east end of Barriefield Camp was resurfaced with a cold laid bituminous surface.

Highway No. 7

Seven miles of mixed macadam was laid westerly from Perth, with a 1″ top course in which trap rock was used and a 5″ base course.

Considerable rock was crushed and placed on the unpaved portions of the highway.

Highway No. 15

On the mixed macadam laid in 1936 from Perth southerly a 1″ surface course was laid similar to the course laid west of Perth. A diversion at Port Elmsley was graded and paved.

Highway No. 29

A contract for grading and penetration macadam from Carleton Place south for six miles, was completed with the exception of the top course.

Highway No. 33

Penetration macadam west from Kingston was completed to the Ernestown-South Fredericksburg Boundary. Between Bath and Conway the grading and most of the waterbound was finished and from Conway to Glenora Ferry the grading was only partially completed.

Highway No. 38

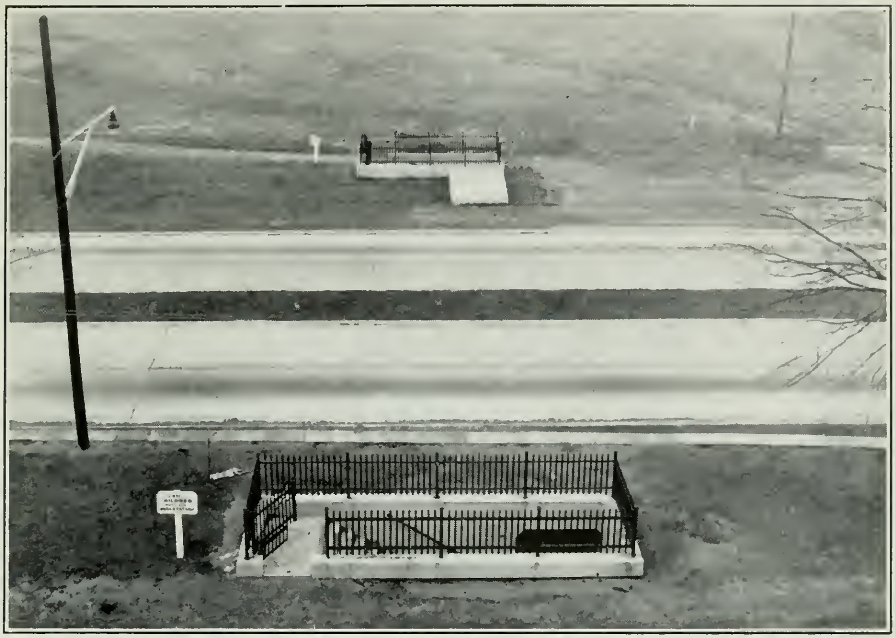
Grading and culverts were completed between Verona and Godfrey about 5.3 miles. The grading between Glenvale and Hartington was partially completed and two miles of penetration macadam laid.

Parkham bridge was widened to thirty feet.

Road No. 41

A new bridge was built over the Claire River and some grading done south of Erinsville.

Crushing operations both for stock piling and placing on the road were carried out on Wolfe Island.



School children's underpass, Middle Road.

St. Lawrence River Road

The most interesting project on this division was the commencement of the construction for a divided highway with thirty foot center boulevard on the St. Lawrence River Road. This new road follows the River from Gananoque easterly and Brockville westerly to connect with the new International Bridge at Ivy Lea and will be about 26 miles long, about 30% of the heavy rock work was completed.

In addition to general maintenance, 46 miles of stone road was surface treated, all gravel roads were treated with calcium chloride or oil dust layer; 70% of the road mileage was kept open for winter traffic.

Division No. 9 — Ottawa

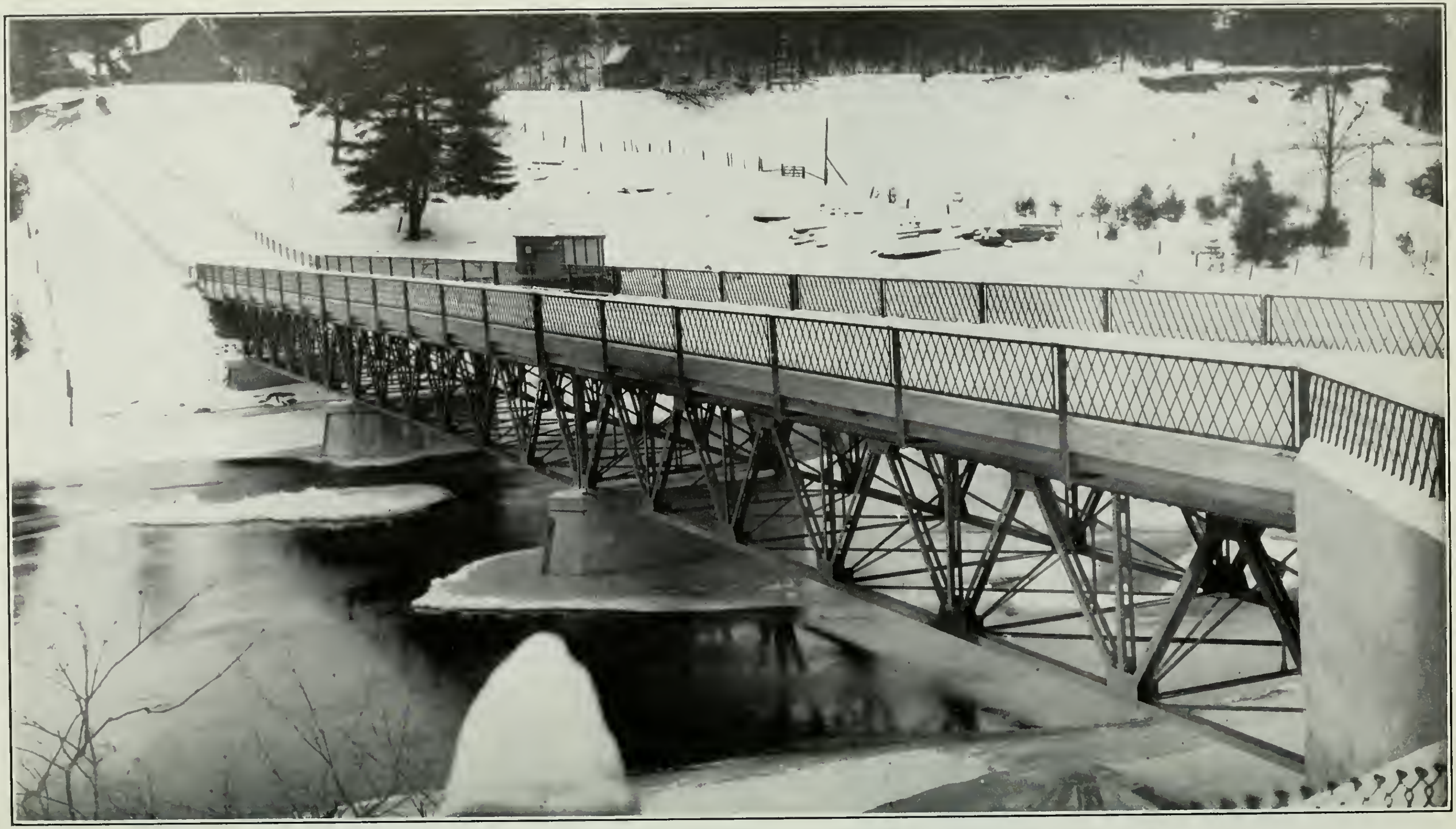
Highway No. 16

Beckitt's Landing Bridge over the Rideau River was completed. The old bridge was removed and the approaches to the bridge were paved with concrete and guard rail erected. South of Kemptville a reinforced concrete floor was placed on the overhead crossing of the Canadian Pacific Railway and a dangerous hump eliminated.

Highway No. 17

The connecting link one and a quarter miles long through Beachburg was paved with concrete and storm sewers installed. A portion of the connecting link in the town of Renfrew was paved and the grade considerably improved.

East of Ottawa at a point known as "The Waterfall" a newly graded section was paved with mixed macadam, and a section in the village of Plantaganet was treated similarly.



BURNSTOWN BRIDGE, RENFREW COUNTY, ROAD No. 2

In the town of Rockland a rock cut was carried out by day labor, eliminating two bad curves.

On the main street of Hawkesburg, which is the connecting link, a cold laid bituminous surface was placed.

A concrete pavement contract was awarded between Chute-a-Blondeau and Point Fortune, the grading only, consisting of a large amount of rock work was completed.

Highway No. 29

A considerable amount of tile drain was installed on this road and also a large amount of patching.

Highway No. 31

Morrisburg subway under the Canadian National Railway and most of the paving for the approaches.

North and south of Vernon a grading contract, including two bridges over the Castor River was started. All work done was confined to two diversions, which will eliminate a number of bad right angle turns.

On the portion of this road in Carleton County a considerable amount of heavy patching was done.

Highway No. 34

A section of concrete pavement was laid between Alexandria and Lancaster. This made the concrete continuous between the two places. This is mostly ten feet in width, with twenty feet over the crests of hills. Standard width concrete pavement was laid north from Alexandria to McCrimmons Corners, slightly over nine miles. The connecting link through the Town of Alexandria was paved the full width of the street with curbs and gutters and some storm sewers.

Some work was done on secondary roads. New floors were placed on two bridges over the Madawaska River at Calabogie and the approaches improved. A mile of grading was done on the Calabogie-Lanark Road.

During the year 41½ miles of stone road was surface-treated and all roads on the division were kept open for winter traffic.

DIVISION NO. 10 — BANCROFT

Highway No. 28

Grading operations were carried on in the vicinity of Paudash Lake, but only about one mile was completed.

Highway No. 41

Grading operations were carried on between Northbrook and Cloyne, about two miles being completed ready for gravel surface. Some gravelling was done between Northbrook and Kaladar.

Between Dacre and Griffith about a mile of newly graded road was opened to traffic and grading operations were started between Dacre and Eganville.

Highway No. 60

Four miles of grading in various sections between Whitney and Madawaska were completed, greatly improving grade and alignment.

Considerable gravel was crushed and applied between Golden Lake and Lake Dore and between Golden Lake and Deacon Bridge. Some gravelling was done on the secondary road from Killaloe to Round Lake.

Highway No. 62

About 70% of the grading between Ormsby Road and Millbridge was completed. Crushed gravel was placed on the road between Bancroft and Maynooth. Between Combermere and Maynooth about three miles of grading was finished, and some grading completed between Barry's Bay and Combermere.

Two thirty-foot rigid span concrete bridges over the Indian River west of Pembroke were erected and opened to traffic in November.

One mile of new grading on a secondary highway between Clarendon and Peter's Crossing was completed. Various short sections of grading on secondary roads were carried out by local labor.

Two hundred and ninety-four miles of highways on the division were kept open for winter traffic.

Division No. 11 — Huntsville

Highway No. 11

The rock cut at Gibraltar one half mile in length was completed and a mulch surface laid. This work eliminated a particularly dangerous reverse curve. Work

Middle Road looking east, west of Clarkson Side Road.

Looking north toward Callander, Highway No. 11.

was started at Beaver Creek Hill, which when completed will greatly improve grade and alignment. Grading was done on three important revisions between Bracebridge and Huntsville; only one being completed.

Construction of a swing bridge over the Muskoka River at Huntsville was well under way.

Highway No. 35

Crushed gravel was applied between Dorset and the junction with Highway No. 60. Crushed stone was placed on the road between Hall's Lake and Carnarvon and some grade reductions carried out.

Highway No. 60

Mulch surface was laid from Highway No. 11 to junction with Highway No. 35 east of Dwight, a distance of thirteen and one half miles. Crushed gravel was laid from this point to Tea Lake in Algonquin Park.

From Algonquin Park Headquarters grading of the highway was completed and gravelled to Whitney.

Highway No. 69

Revisions and widening of the grade were completed to north limits of Bala. Work was done on a large revision between Bala and Glen Orchard. Considerable work was carried on between Glen Orchard and Foote's Bay on revisions and widening. Crushed gravel was placed on the road from Foote's Bay to the northerly boundary of Muskoka district. Revisions between Bala and Glen Orchard were mulch surfaced.

On secondary roads considerable work was done. Four miles of new grading was completed between Huntsville and Baysville. From the west limits of Baysville mulch surfacing was done to Norway Point. The revision at Wawa was completed, improving the frontage on Lake of Bays.

The grade between Bracebridge and Beaumaris was improved and some mulch surfacing carried on. Mulch was laid between Port Carling and Glen Orchard.

About five miles of grading was completed between Kinmount and Gooderham, eliminating bad curves and narrow bridges.

A revision was started at west entrance to the village of Haliburton, to improve alignment and visibility at the C. N. R. crossing.

Two hundred and seventy-three miles on this division were kept open for winter traffic.

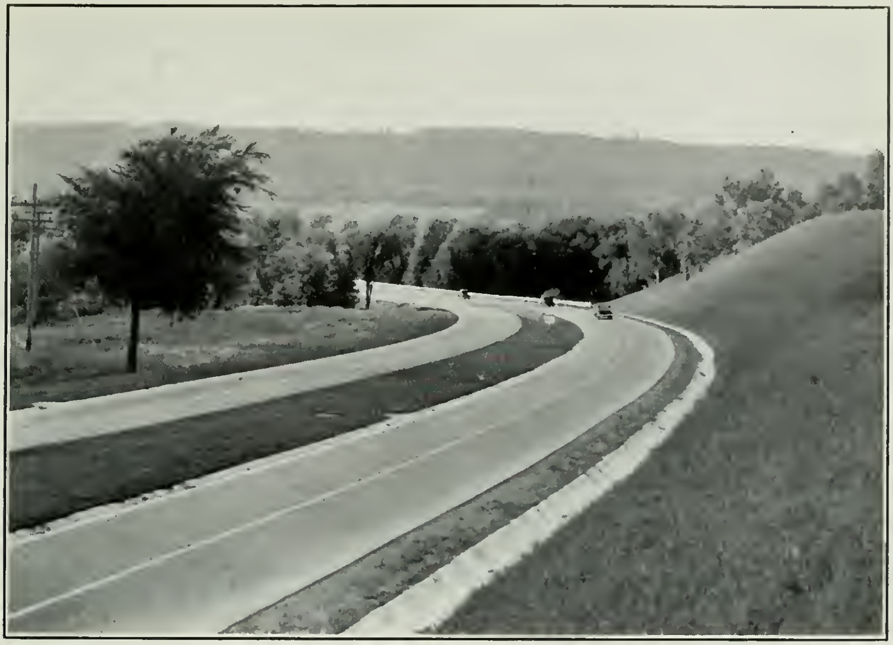
DIVISION NO. 12 — PARRY SOUND

Highway No. 11

From the south limits of Powassan southerly the road was regraded and raised to a class "A" standard and over eight miles of concrete pavement was laid. Excavation operations were carried on at Powassan Hill during the winter and the grade was reduced from a 10% to a 5% grade.

Through the village of Sundridge the road was regraded, widened and four miles of mixed macadam laid. This consisted of a 5″ base course and 1″ top course.

Cavers Hill — Trans-Canada Highway, west of Rossport. Highway rises 800 feet above lake in two miles.



Dundas Diversion, looking toward Dundas.

The highway was straightened out through the Town of Burks Falls and the concrete substructure for a new bridge over the Magnetawan River was completed. It was found necessary to construct this bridge on a 4% grade and also leave sufficient room on the south bank for a twenty foot roadway, together with headroom for a C. N. R. siding. The structure will have a thirty foot clear roadway and a four foot sidewalk on the down stream side.

Highway No. 69

Four miles of road south of Parry Sound and one mile north were regraded and paved with mixed macadam. From Nobel south four and one half miles of new grading was completed to a class "B" standard. Local granite was crushed and placed on road between Nobel and Shawanaga a distance of about ten miles and two miles of this was mulch treated.

Between Pointe au Baril and Byng Inlet about seven and one half miles of grading was completed and an overhead crossing of the C. P. R. built. A bridge was erected over the Naiscoot River.

In addition regular maintenance was carried out on 120 miles of King's Highways and 260 miles of secondary roads, together with the supervision of by-law expenditures in organized townships and direct assistance to Statute Labour Boards in unorganized Municipalities.

There were 285 miles kept open for winter traffic.

Division No. 13 — North Bay

Highway No. 11

Early in the year 15 miles of grading from North Bay northerly was contracted for; of this twelve and one half miles were completed except for the trimming.

In November an additional 12.6 miles was awarded and work carried on through the winter, most of the rock work being completed. This road is being graded to Standard A, with greatly improved alignment and reduced grades.

Road No. 17

Ten miles of concrete pavement was laid from Laronde Creek to Sturgeon Falls. A new steel and concrete bridge was built over the Little Sturgeon River and also a new concrete structure, rigid frame over Laronde Creek.

Between Warren and Hagar about 4 miles of grading was completed. Crushed gravel was placed on the road between Sturgeon Falls and Warren.

Between Chalk River and Point Alexander some curve revision was carried out, also some gravelling. Crushed gravel was applied between Point Alexander and Houghtons.

Gravel mulch was laid through the village of Mattawa.

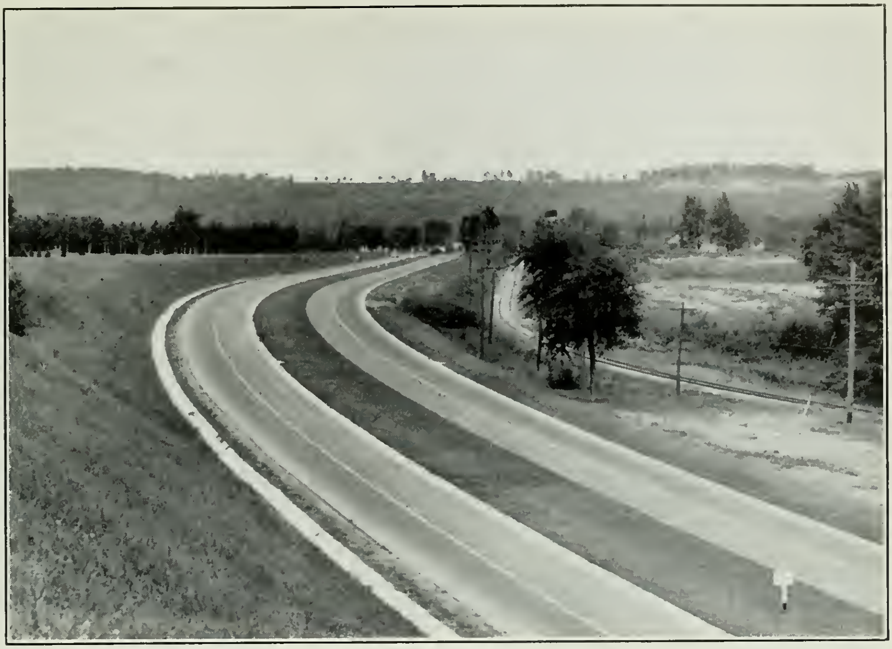
Highway No. 63

The grading was completed from the Big Jocko River to Timiskaming, connecting Timiskaming with North Bay. Some regrading to eliminate two dangerous railway crossings between Feronia and Zero was started.

Highway No. 64

A subway was partially constructed at Field. With the completion of this and the grading of the approaches, a very dangerous railway level crossing will be eliminated.

Wide angle view of Clover Leaf from top of school intersection, Highway No. 10 — Middle Road.



Dundas Diversion, looking toward Hamilton.

Highway No. 94

Six and one half miles of grading was completed between Callander and Highway No. 17 and two and one half miles of gravel mulch was laid between Callander and Dafoe Hospital.

All gravel sections on Highways Nos. 11, 17 and 94 not under construction were treated with a dust layer; 503 miles on the division were kept open for winter traffic.

DIVISION NO. 14 — NEW LISKEARD

Highway No. 11

A general revision in the location of this highway was made. The object of this was to shorten the route for through traffic and the elimination of many dangerous curves and hills. A six mile grading contract from Round Lake to one mile north of Dane was 70% completed. Six and one half miles of mixed macadam was laid from New Liskeard north and about 30% of the grading completed between there and Englehart.

From Latchford south for 6 miles, heavy grading operations were carried on, and about 90% completed.

In November grading contracts were awarded from four miles south of Timagami to fourteen miles north. This work was carried on all through the winter and was about 60% completed.

Highway No. 65

Gravel was laid for fifty miles between New Liskeard and Stoney Creek.

Minor day labour construction was carried out on secondary roads and settlers roads, the most important items being the construction of small timber bridges, and the placing of winter gravel from pits inaccessible during the summer months.

The old retread was surface treated from Latchford to New Liskeard. Dust layer was applied on about 200 miles of gravel road; 201 miles of road was kept open continuously for winter traffic and 75 miles for part of the season.

Division No. 15 — Matheson

Highway No. 11

A grading contract was about 60% completed from the Otto township overhead bridge to Kirkland Lake Road, a distance of 5 miles. This work is being done to a class "A" standard and in addition to shortening the road, eliminates one of the most dangerous sections of the Highway.

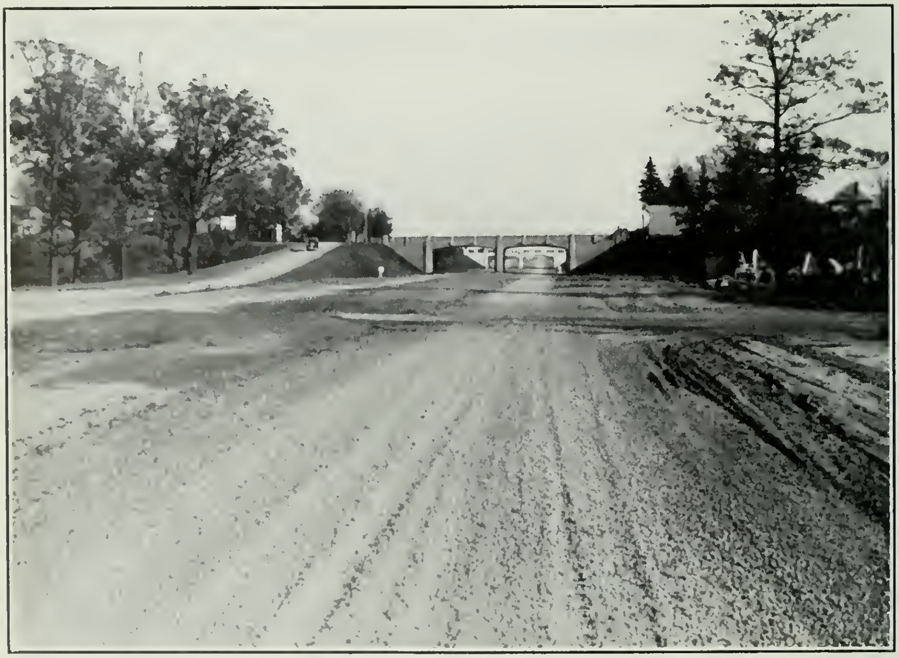
A fifty foot steel and concrete bridge was built over the T. & N. O. Railway track to replace an old wooden structure. A new bridge, steel and concrete with three fifty-foot spans was constructed at Kenogami Lake. Considerable gravel was crushed for the north end of this road.

Highway No. 66

From Kirkland Lake to Quebec Boundary, crushed gravel was placed on the road, and gravel dust layer applied.

Highway No. 67

Concrete pavement was contracted for from Pamour to Timmins, only about three miles of pavement was completed and about 50% of the grading and culvert construction.



Divided Motorway — Grimsby.

Modern spraying machine in action.

Construction was started on a new road to reduce the distance by road between Matheson and Timmins by sixteen miles. There is now about twenty-five miles of this road under construction, about 30% being completed during the year. Three pile bridges with concrete decks were completed as far as the decks; these were at Driftwood River, North Driftwood River and Barber's Bay.

Eleven mining road projects were carried on during the year and considerable work was done on secondary and township roads. Calcium chloride was applied on many gravel sections; 120 miles of highway was kept open for winter traffic.

Division No. 16 — Cochrane

Highway No. 11

Grading operations were carried on from a point four miles south of Cochrane southerly a distance of six miles; this work was about 50% completed.

The fill at Opasatika River was completed and crushed gravel was placed on the road between Cochrane and Hearst.

A bridge over the Mattawishquia River at Hearst was completed except for the railing and slab at each end.

A contract was awarded for the construction of the Ground Hog River Bridge and for the grading of the approaches; only the shore piers and abutments were completed. Certain sections of gravel road were treated with dust layer, no roads were kept open for winter traffic.

Division No. 17 — Sudbury

Highway No. 17

Six miles of grading and culverts between Sudbury and Coniston started in 1936 were completed. Between Coniston and Hagar grading operations were carried on over eighteen miles of road and the grading about 50% completed.

West of Sudbury the old retread pavement was repaired. All gravel sections of this highway not under construction were treated with a dust layer.

Eight miles of grading was done on the Falconbridge Road.

On the Sudbury-Cartier Road and the Sudbury-Capreol Road crushed gravel was placed on the road.

Five mining road projects were carried on in conjunction with the Federal Government.

Two hundred and four miles of King's Highway and secondary roads were kept open for winter traffic.

DIVISION NO. 18 — BLIND RIVER

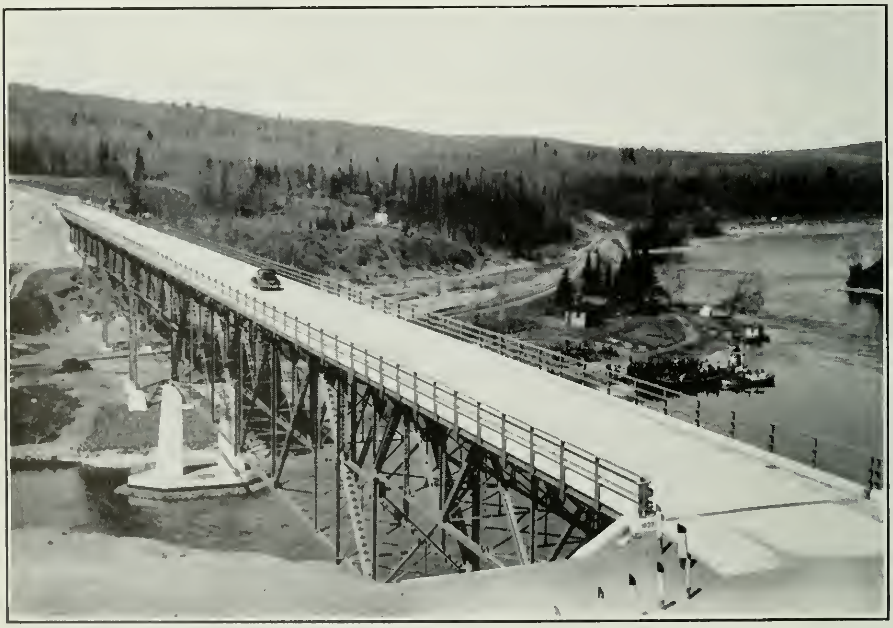
Highway No. 17

Grading operations were carried on between Webbwood and McKerrow a distance of ten miles and the work was about 50% completed. From Massey East for seven miles the road was surfaced with crushed gravel. In the vicinity of Spanish some ditching and culvert construction was done.

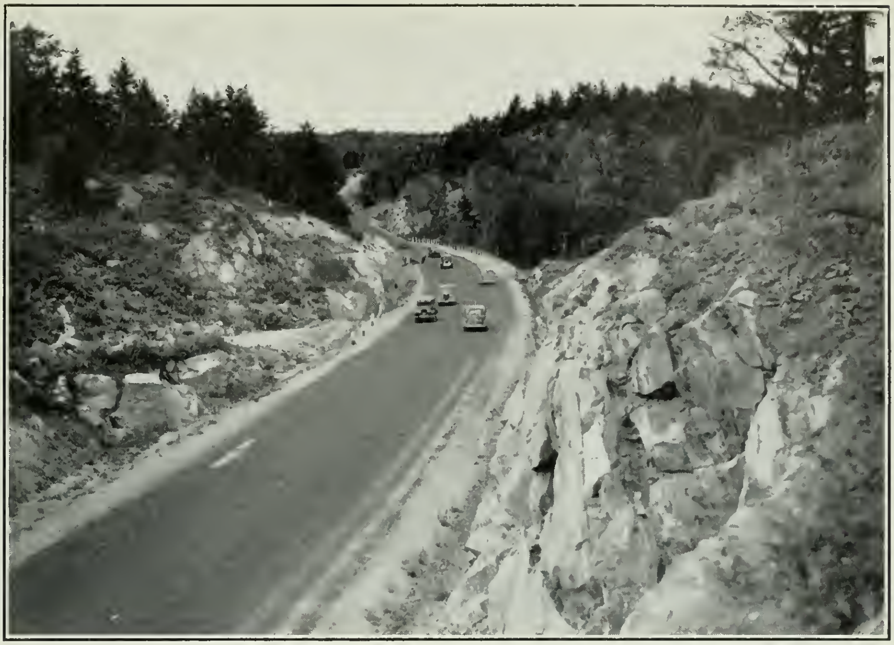
At the Cutler diversion a mile of grading was completed and a sixty-foot concrete bridge erected across the Serpent River. Three miles of the road east from Algoma was graded and over Lauzon Creek a thirty-foot arch was built.

West from Blind River three miles of twenty-foot concrete pavement was laid and a mile of single strip.

Between Iron Bridge and Thessalon fifteen miles of grading was under contract, of which three miles was partially completed. Two miles of grading was finished immediately west of Bruce Mines. Portlock Diversion was completed and concrete bridges were erected at Portlock and Shewfelt Creeks.



Nipigon River Bridge on Trans-Canada Highway, east of the Village of Nipigon. Total length, 772 feet 8 inches. Centre span, 220 feet.



Rock cut, four and one-half miles south of Gravenhurst, Highway No. 11.

At Echo Bay three quarters of a mile of single strip concrete pavement was laid. This completed three miles of standard width concrete pavement south of Echo Bay. A rigid frame concrete bridge was built over Bar River and a mile of grading completed north of Echo Bay.

Seven miles of concrete pavement was laid west of Garden River connecting up with two miles of retread east of Sault Ste. Marie.

North of the Sault the grading was completed from Carp River to Flour Bay and grading operations were under way as far as the Montreal River.

A short revision at Little Current was graded and new slips and general improvements to the ferry dock undertaken.

Calcium chloride or bituminous dust layer was applied to all gravel sections on No. 17 Highway not under contract. Highway No. 17 was kept open for winter traffic.

DIVISION NO. 19 — FORT WILLIAM

Highway No. 17

Four creosoted timber bridges were completed west of Nipigon and also four east of Nipigon. A 773-foot steel truss bridge with concrete deck over the Nipigon River was finished.

West from Fort William the road was regraded to Class A standard and eight miles of mixed macadam laid using local gravel. Crushed gravel was placed on the road between Kakabeka Falls and Dawson Road, also from Upsala westerly for two miles.

A stone masonry guard wall was erected on Cavers Hill about three quarters of a mile long.

Parks were established for the accommodation of tourists at Wolfe River (sixty acres); Savanne River, Argonne (twenty acres); Inwood east of Upsala (eighty-four acres); Firesteel River; Niblock (sixty-five acres).

Highway No. 17A

The Dawson road was realigned and graded to forty feet, ready for laying a mixed macadam surface from Port Arthur westerly six miles. Three creosoted timber bridges were built over Strawberry Creek about seventeen miles west of Port Arthur.

Highway No. 61 (International Highway)

This road was surface treated for ten miles, from Hamilton to Cloud River. A park was established at Middle Falls, Pigeon River six miles from the International Boundary.

The following work was done on secondary roads:

Between Highway No. 17 and Red Rock four miles of new grading and west from Shebandowan three miles of grading was done.

Hymers road was regraded for about six miles, and Marks road about one-half mile. Silver Mountain road was diverted and graded for one-half mile and two creosoted timber bridges built.

From Beardmore east about twelve miles of grading was finished and four creosoted timber trestle bridges erected. West of Bankfield one mile of new grading was completed and one creosoted timber trestle.

Work was carried out on five mining road projects under Federal Government aid.

Two hundred and seventy miles of King's Highway was kept open for winter traffic and about 600 miles of secondary roads intermittently.

DIVISION NO. 20 — KENORA

Highway No. 17

Grading was completed between Dyment and Dryden and the first application of gravel put on. Grading from Dryden to Vermillion Bay was about 80% completed.

Two miles of mixed macadam using local gravel was laid from Kenora Subway westerly and thirteen miles westerly from Keewatin. Crushed gravel was spread on the road between Kenora and Longbow Corner.

Eight piers for the substructure of the Keewatin Channel bridge were completed. This will be a reinforced concrete and steel bridge with an overall length of 903′ 11″.

A creosoted timber bridge with two 135-foot spans and three 20-foot approach spans on concrete piers was erected at Cameron Bay.

Highway No. 70

Grading was started on an eight-mile revision of the Heenan Highway between Blindfold Lake and Andy Lake.

Crushed gravel was placed on the road between Longbow Corner and Nestor Falls.

Looking north, one-half mile north of Temagami — Highway No. 11.

Highway No. 72

About 60% of the grading was completed on an eight-mile revision between Dinorwic and Sandybeach Lake. Gravel was crushed and applied between Sioux Lookout and Sandybeach Lake.

Highway No. 72

The grading between Hudson and Sioux Lookout was completed.

The substructure was partially completed on a bridge at Frog Rapids.

Some work was done on secondary roads. An approach to the town of Dryden from the Trans-Canada Highway was partially graded. A 165-foot creosoted timber trestle was erected across the Wabigoon River one-half mile north of Dryden. Four or five grade revisions at various locations were carried out. Work was done on four mining road projects with Federal Government assistance.

A small amount of dust layer was applied.

Three hundred and thirty-one miles of King's Highway was kept open for winter traffic and 282 miles of secondary trunk roads and township roads were kept open intermittently.

DIVISION NO. 21 — FORT FRANCES

Highway No. 70

Grading work from Nestor Falls four miles southerly was practically completed. Work on the rock cuts was carried on throughout the winter. Crushed gravel was placed on the road from Emo north for thirteen miles.

Highway No. 71

Contracts were awarded for thirteen miles of mixed macadam from Fort Frances west; only grading operations were carried on during the construction season.

Grading and gravelling was partially completed between Devlin and Emo. Some crushed gravel was placed on the road between Emo and Rainy River.

A number of small jobs were carried out on secondary roads.

Dust layer was applied on Highway No. 71 between Emo and Rainy River.

During the winter all the highways on the division were kept open for winter traffic.

1937

Report Upon the Work of the Municipal Branch for the Year 1937

J. A. P. Marshall, Chief Engineer of Municipal Roads

COUNTY ROADS

Provincial aid to counties on road improvement is given through County Road Systems under The Highway Improvement Act.

Since the passing of The Highway Improvement Act in 1901 and to the end of 1937 a total of $134,830,465.05 has been expended on construction and maintenance of county roads, of which the Province has contributed $63,654,935.86. This includes the county expenditure during 1937, on which the provincial subsidy was paid in 1938.

At the end of 1937 the Province was paying subsidies to the counties on 8,034.2 miles of county roads — approximately 15 per cent. of the total road mileage in the area covered by the County Road System.

Expenditure on county roads in 1937 was as follows: —

	Total Expenditure	Provincial Subsidy
Construction: —		
County Roads	$ 2,033,201.73	$ 1,016,600.86
Maintenance: —		
County Roads	$ 2,029,551.66	$ 1,014,771.63
Total Expenditure	$ 4,062,753.39	$ 2,031,372.49

The work on which the above expenditure for construction was made included the following: —

Gravel or Stone	149.81 miles
Surface-treated gravel or stone	44.20 "
Low-cost bituminous surfaces	92.06 "
Mixed macadam and asphaltic concrete	7.75 "
Cement concrete	2.94 "
Total	296.76 "

Bridges over 10-foot span	31
Steel arch and concrete culverts	51
Pipe and tile culverts	885

Construction Work

A detailed list of the important work undertaken by the various counties and townships is found further in this report grouped in districts.

Maintenance Work

Bituminous Surface Treatment	157.20 miles
Dust Prevention Treatment (oil)	134.25 “
Dust Prevention Treatment (calcium)	876.25 “
Dust Prevention Treatment (salt)	5.00 “
Clay-Gravel Stabilization (calcium)	114.12 “
Clay-Gravel Stabilization (salt)	
Gravel and Crushed Stone Resurfacing: —	
(a) Pitrun gravel applied	214,147 cu. yds.
(b) Crushed gravel applied	411,882 “
(c) Crushed stone applied	76,253 “
Snow Removal — Season 1937–1938: —	
(a) Mileage of road kept open with mechanical equipment	4,885 miles
(b) Snow fence erected	778.55 “

County Suburban Roads

The mileage of suburban roads is 735.3 miles. The expenditure at the end of 1937 amounted to $25,705,217.85 of which the cities and separated towns have contributed $6,771,179.95 or five per cent. of the total expenditure made on the County Road System.

In 1937 the expenditure on County Suburban Roads was $900,033.62 of which the Province contributed $450,016.81 and the cities $232,276.63.

EXPENDITURES ON SUBURBAN ROADS — 1937

Name of County		Mileage	Totals	Government Grants 50%
Brant		20.2	$ 23,747.99	$ 11,873.99
Carleton		89.6	105,687.25	52,843.63
Elgin		18.3	6,423.04	3,211.52
Essex		37.5	24,962.82	12,481.41
Frontenac		28.5	23,761.77	11,830.89
Grey		32.4	25,538.26	12,769.13
Kent		9.5	28,267.22	14,133.61
Lambton		12.0	2,852.62	1,426.31
Leeds and Grenville	Brockville	6.2	3,753.49	1,876.74
	Smith's Falls	5.2	5,672.94	2,836.47
Lincoln		12.3	4,911.54	2,455.77
Middlesex		41.0	8,713.30	4,356.65
Ontario		13.5	11,849.35	5,924.68
Oxford		4.0	766.14	383.07
Perth		7.5	3,960.92	1,980.46
Peterboro		39.6	25,914.12	12,957.06
Waterloo	Kitchener	9.3	11,940.39	5,970.19
	Galt	7.5	7,475.58	3,737.79
Welland	Niagara Falls	9.9	2,469.07	1,234.54
	Welland	6.5	2,583.92	1,291.96
Wellington		23.5	6,858.43	3,429.21
Wentworth		61.5	70,274.28	35,137.14
York		239.8	491,649.18	245,824.59
Totals		735.3	$ 900,033.62	$ 450,016.81

DISTRICT NO. 1 — *Counties of Essex, Kent and Lambton.*

Essex — During the season one 120-foot span bow string type bridge was built over River Canard at Loiselleville, and one 80-foot span rigid frame bridge was constructed over Canard River on the Windsor Suburban Area road near McGregor. Three culverts and 8 corrugated pipes of various sizes were installed. Sixty miles of county road was treated to eliminate dust; 25,250 cu. yds. gravel and crushed stone was applied during the year.

Kent — Eleven miles graded to standard; 69 pipe culverts were installed; 2.2 miles bituminous mulch was laid on County Road No. 10 between Cedar Springs Station and No. 3 Highway; 1.1 miles 20-foot concrete pavement was laid on Chatham Suburban Area road No. 14; 3 miles was treated for dust prevention; 31,300 cu. yds. gravel and 3,000 cu. yds. crushed stone was distributed to the roads.

Lambton — 6.54 miles was graded to standard including a fill west of the Village of Florence, where 3,900 cu. yds. were required. Forty-five pipe culverts of various sizes were installed.

Maintenance was carried out as usual, involving the distribution of 8,868 cu. yds. of gravel and 5,525 cu. yds. of crushed stone. One mile of mulch was given bituminous surface treatment.

DISTRICT NO. 2 — *Counties of Elgin, Middlesex, Norfolk* and *Oxford.*

Elgin — Grading work was carried out on the Spring Creek Hill Diversion, County Road No. 28, in the Township of Bayham. One-half mile of gravel mulch pavement was laid by the St. Thomas Suburban Commission on the Fingal Road. General maintenance work was carried out on the county's system of gravel roads.

Townships in Elgin — Several heavy washouts were repaired in Bayham Township on the Otter Creek.

Equipment for the spraying of chemical weed killer was purchased by the Township of Dunwich.

Middlesex — Grading was completed on Plover Mills Hill, Road No. 26, in West Nissouri Township.

London Suburban Area, Road No. 34, Belmont to Nilestown, 4.0 miles was paved with concrete.

Heavy maintenance expenditure was necessary to replace washouts following the April flood. The concrete pavement on the north approach to the Wardsville Bridge, Road No. 1, was replaced to grade by jacking methods after dropping four feet. All county bridges on the Thames River held during the high water.

Townships in Middlesex — Due to the flood damage, bridges over 10 ft. span were necessary in the following townships: Delaware (2), Ekfrid, London (2), McGillivray, Westminster.

Extensive damage to grades was done by the Thames River in the townships of London, Lobo and Delaware.

Oxford — Serious flood damage in April made necessary the construction of new bridges on Road No. 10, Dereham Township; Road No. 19, Village of Otterville; two bridges on the North Oxford-West Oxford township boundary; and 1 on the Blandford-East Zorra township boundary.

Two miles of grade with a crushed stone surface was constructed on Road No. 4. The balance of the construction work planned for 1937 was held over with until 1938.

Townships in Oxford — Due to flood damage, bridges over 10 ft. span were necessary in the following townships: Bladford, Norwich North, Oxford North, Oxford West and Zorra East.

Norfolk — Grading was completed on 1.75 miles. A total of 21 miles of double surface treatment and mulch pavement was laid in sections of 1 to 3 miles in various sections of the county.

Heavy flooding along the Big Creek caused several washouts, but all county bridges stood the high water. The combination bridge and mill dam at Teeterville on County Road No. 25 was saved by dynamiting the fill.

Townships in Norfolk — Considerable difficulty was experienced in keeping the township roads in Norfolk in repair, due to the year around demand of the Tobacco Industry. Three snow-plows were purchased and provision made to keep all roads open in the winter.

DISTRICT NO. 3 — *Huron, Perth, Waterloo and Wellington.*

Huron — Two culverts and 1 bridge over 10 ft. were constructed. Fifteen miles of bituminous mulch was put down in different sections, the main portion between Seaforth and Brussels.

One hundred and nineteen miles of road were treated with calcium chloride; 58,524 cu. yds. of crushed gravel were put on and 350 miles of roads kept open during the winter.

Township Roads — 3.6 miles of road were graded and covered with crushed gravel. Seven culverts and 3 bridges over 10 ft. were constructed. Two miles of dust layer.

Resurfacing work was the biggest part of the work; 10,784 cu. yds. of pit-run gravel and 64,339 cu. yds. of crushed gravel were applied.

Perth — 9½ miles of graded and covered with crushed gravel — 19 pipe culverts were put in and 45 side entrance culverts. About 5 miles of road were treated at different points with calcium chloride and 5¾ miles of bituminous double surface treatment and 1½ miles of surface treatment were put on the roads; 21,146 cu. yds. of crushed gravel were placed where required.

Township Roads — Two miles of road were graded and covered with crushed gravel. Seven concrete culverts and 3 bridges were built. One mile of stabilized road with calcium chloride was put down in Hibbert Township. The main work was gravelling and 60,089 cu. yds. of crushed gravel was used.

Waterloo — 7.5 miles of grading was completed and covered with crushed gravel. Two concrete culverts and 2 bridges were built; 3.25 miles of bituminous mulch top was put on.

Maintenance of surfaces was very well carried out; 15.9 miles of bituminous surface treatment, 3.25 oil dust layer and 59.25 miles of calcium dust layer were used and the surfaces patrolled with power maintainer and trucks; 35,906 cu. yds. of crushed gravel were applied.

Township Roads — 16.5 miles of road were graded and covered with crushed gravel. Two concrete culverts and 1 bridge were constructed. Maintenance consisted of 9 miles treated with calcium chloride and 36,246 cu. yds. of crushed gravel were applied. All the townships in Waterloo county own and operate power maintainers and keep their surfaces in order.

Wellington — Twenty-one miles of grading were completed and covered with crushed gravel. Seventy-six pipe culverts were installed and 58 side entrance. Two concrete culverts were completed. Three miles of bituminous top (Stancol) were put down north of Elora.

Maintenance of the roads consisted of 160 miles treated with calcium chloride and 6 miles with oil dust layer; 50,000 cu. yds. of crushed gravel were applied and 360 miles of road kept open during the winter months. Power maintainers were used extensively.

Township Roads — Twenty-one miles of road were graded and 16 miles covered with crushed gravel. One hundred and twenty-five pipe culverts were installed and 8 concrete culverts constructed. One bridge over 10 ft. was constructed.

DISTRICT NO. 4 — *Brant, Haldimand, Lincoln, Welland and Wentworth.*

Brant — The construction in the county was very light for the current year including 5 miles of grading and stone, one and one-half miles of new surface treatment and one culvert.

Haldimand — One large bridge was constructed by the county of Haldimand (Peart Bridge) having 2 spans of 35 feet and 1 span of 50 feet. This bridge in the early part of the year was a township bridge but during the summer months under a Court Order, it was made a county bridge but the township was to be responsible for 50 per cent. of the construction and maintenance. In addition to this, the county surface-treated for the first time, approximately 10 miles of road and stabilized approximately 6 miles. Weed spray was used for the first time in the county and about 50 per cent. of the roads in the county were sprayed.

Lincoln — Two bridges were constructed in the county and approximately 50 miles of road were resurface treated. Two curves on Niagara Street were straightened and widened with concrete.

Welland — One and one-half miles of macadam road was constructed and a double surface treatment applied. The approaches to the N. S. and T Railway bridge were widened under Railway Boards Order. A new implement shed was erected and 3 bridges were constructed.

Wentworth — Approximately 4 miles of retread were constructed and 1 mile of road was surface-treated for the first time. Two bridges were constructed and approximately 33 miles of road was re-surface treated.

The counties in this district maintained their roads in a very satisfactory manner during the current year and all county roads were kept open for traffic during the winter months.

In the townships in the above district, 5 culverts were constructed, 9 bridges were built and approximately 9 miles of road was surface treated for the first time.

DISTRICT No. 5 — *Counties of Bruce, Dufferin and Grey.*

Bruce — This county understood a very well balanced program for 1937. Their total expenditure amounted to $139,530.70, of which $72,550.87 was charged to construction account and $66,979.83 to maintenance.

The main items of construction consisted of 5 miles of grading, principally grade reduction. Forty-five pipe culverts were installed on county roads. Eight miles of low cost bituminous road were undertaken, 3 miles of which were only partially completed owing to unsatisfactory working conditions late in the season. One county bridge, consisting of new concrete abutments and second-hand steel span was constructed, off the county system. New equipment acquired during the year consisted of one Ford pick-up truck, one Rushton Diesel Roller, one heavy duty power grader, one Gyrol Crusher, one set of portable scales and a chip spreader.

An adequate program of maintenance was carried out consisting chiefly of the application of 6,000 cu. yds. of pit-run gravel, 46,000 cu. yds. of crushed gravel and 4,000 cu. yds. of crushed stone. One hundred and ten miles of road were treated with calcium chloride as a dust preventive. Six miles of previously built bituminous road were surface treated. Approximately 100 miles of road were kept open for winter travel and 39 miles of snow fence was erected. In addition, about 19 miles of road were treated with chemical weed destroyer.

Dufferin — The net expenditure in this county for 1937 was $46,451.91. The principal items of construction consisted of the construction of 3¼ miles of new grade on the county system which was surfaced with crushed gravel. On 16 ft. wooden bridge was replaced by two steel arches 9 ft. x 30 ft. New machinery purchased consisted of 1 power maintainer.

An adequate program of maintenance was carried out and a considerable mileage of their gravel road was treated with dust layer.

Grey — Expenditure in this county for the year 1937 amounted to $94,469.79. Construction work in the county system was practically at a standstill, curve easements at several corners being the only construction activity. On Grey-Owen Sound Suburban roads 2.3 miles of low cost bituminous road was constructed from Owen Sound city limits northerly. No new bridges were undertaken.

The only major machinery purchases were two new power maintainers.

A very efficient maintenance program was carried out, chiefly consisting of the resurfacing of gravel roads with crushed gravel. The connecting links in villages which had bituminous surfaces were practically all resurfaced. Approximately 75 miles of gravel road were treated with calcium chloride as a dust layer.

The townships in this district were fairly active during 1937, the total expenditure being $213,787.00.

Approximately eighty miles of reconstructed grade was put up, 200 pipe and tile culverts were installed, 35 culverts under ten feet consisting of reinforced concrete or steel arches, and 15 bridges exceeding ten feet in span were erected. No heavy purchases of machinery were recorded during the year with the exception of the purchase of a power grader in one township. The condition of the township roads is showing a steady improvement from year to year owing particularly to a more careful selection and grading of the gravel being used, and more attention being given to dragging.

DISTRICT NO. 6 — *Counties of Halton, Peel, Ontario, Simcoe and York.*

Halton — Bituminous gravel mulch was constructed on Road No. 3 from Hornby northerly 3.85 miles, and about one-half mile constructed in the Village of Kilbridge on road No. 7. Stancol shoulders 4, wide were constructed along a 10-foot concrete pavement on Road No. 2 extending from Palermo southerly, a distance of 1¼ miles. Maintenance work consisted of gravel resurfacing 30 miles. Application of calcium chloride dust layer, 9 miles, in addition to the routine dragging of the roads which is very efficiently done with power equipment.

During the winter months the whole system was kept open for traffic by means of snow ploughs and trucks.

Ontario — One and one-quarter miles of bituminous surface was constructed on Oshawa Suburban Road No. 2, Con. 7, East Whitby Township. The following roads were graded and surfaced with gravel: Road No. 8, Lots 17-19, 1.5 miles; Road No. 10, Lots 29-35, 1¾ miles; Road No. 24, Lots 1-5, 2 miles.

Maintenance work consisted of resurfacing with stone and gravel approximately 25 miles, and the application of calcium chloride dust layer on 17½ miles.

A power maintainer was purchased by the county during the year, and a considerable improvement in the standard of surface maintained was noted.

Peel — The approaches to the level railroad crossing on Road No. 9 at Lots 10 and 11, Albion Township, were graded a distance of about three-tenths of a mile and the visibility at this crossing much improved. The steep winding hill on Road No. 15 leading in to the Village of Inglewood was eliminated by relocating the road and reducing the grade to 7 per cent.

Road No. 4 at Lots 5 and 6, Toronto Township, was graded and widened for a distance of 1¼ miles.

Maintenance work consisted of gravel and stone resurfacing 25 miles; application of calcium chloride dust layer, 25 miles; oiling 7 miles, and chemical weed spraying, 20 miles.

Simcoe — Three concrete culverts were constructed. Road No. 13 was graded and gravelled a distance of 1¾ miles at Lots 13-17, Nottawasaga Township. Road No. 4A was graded and gravelled for a distance of 2 miles from the Penetang Road easterly. Road No. 5 was graded from Tioga northerly, a distance of 1¼ miles.

A machinery storage building and workshop was erected in the Town of Barrie at a cost of $3,081.41. It is intended that all county equipment will be brought in to this building to be overhauled during the winter months.

Maintenance work consisted of bituminous surface treatment, 1.2 miles; dust laying with calcium chloride with oil, 44 miles; resurfacing with gravel and stone, approximately 90 miles.

Approximately 32 miles were kept open for traffic during the winter months.

The county purchased a Caterpillar Diesel Auto Patrol Power Maintainer.

York — The main construction projects during 1937 were:

1. — 1.39 miles of concrete pavement on Road No. 17 from Agincourt to Malvern.

2. — 1.27 miles of bituminous macadam (penetration) on Road No. 8 from No. 7 Highway northerly.

3. — 1.25 miles of bituminous macadam on Road No. 26 from Yonge Street to Bayview Avenue.

4. — 3.91 miles of grading and traffic bound macadam surface on Road No. 25 from Richmond Hill to Maple.

5. — 1.31 miles of grading and hill cutting on Road No. 14 from Vandorf southerly.

A 60-foot span rigid frame concrete bridge was constructed over Mimico Creek on Road No. 24, Church Street, and the existing 40-foot span reinforced concrete arch bridge in Pefferlaw was extended to provide for the widened roadway in this section.

Maintenance work consisted of: 80 miles of bituminous surface treatment; application of dust layer, about 26 miles, and resurfacing with crushed stone and gravel where required.

During the winter months the whole system was kept open for traffic by means of ploughs and trucks.

General

The problem of the destruction of noxious weeds along the roadside is one which is increasingly occupying the attention of the County Engineers in this district. The use of chemical weed killers for this purpose is becoming more popular, and the mechanical means of applying the material has been much improved. (Photograph reproduced elsewhere in this report showing one of the modern spraying machines in action.)

DISTRICT NO. 7 — *Counties Northumberland and Durham, Peterborough and Victoria.*

Northumberland and Durham — Owing to heavy purchases of culverts and equipment, construction on roads was limited to only 2¼ miles. The culverts purchased amounted to $9,000.00. The equipment purchases amounted to $10,500.00, which consisted of a power maintainer, two snow ploughs, one Ford dump truck, and a secondary crusher unit with screens.

Construction was carried out one mile east of Campbellford, on Road No. 35, and 1¼ miles on Road No. 25, north of Colborne. The work in Seymour consisted of cutting many small hills, widening and surfacing.

On the Wooler Road, 1½ miles north of Trenton a large multiplate culvert (18 ft. x 40 ft.) with concrete footings and headwalls was constructed.

Five and one-quarter miles of bituminous roads were surface treated with bitumuls.

The 213 miles of gravel roads were maintained by three power machines.

Township Roads — Hamilton Township had quite a heavy programme of bridge construction as did Darlington and Clarke Townships, otherwise the work was maintenance of a routine nature.

Peterboro — At several places throughout the county new grades were built, reducing dangerous curves and eliminating very narrow stretches. The total mileage amounted to thirteen.

About 1.25 miles of asphalt mulch pavement was built on the suburban system south from Highway No. 7, just east of the city.

In the Village of Havelock three-quarters of a mile of asphalt mulch was laid on streets approved by agreement.

At Westwood on Road No. 9 a reinforced concrete bridge was constructed, the type being a twin 24-foot span with centre pier. In conjunction with the Department of Transport at Ottawa an old pier of the Wallace Point Bridge was replaced with concrete.

The maintenance of gravel roads is entirely mechanical, and about twenty miles of these were treated with calcium chloride as a dust layer.

Township Roads — The work in the townships was chiefly routine maintenance with the exception of Otonabee which in co-operation with the contractor paving No. 7 Highway, east of Peterboro had several very steep hills cut down. The work was done gratis by the contractor in order to secure near-by shouldering material.

Victoria — During the year 1937, $32,500 was expended in construction which represents in work chifly 8.5 miles of new grading with the necessary pipe culverts. This mileage was surfaced.

Further 1.7 miles of tar retread was built to extend the piece running from Lindsay easterly on Road No. 5 towards Downeyville.

Maintenance — An old bituminous penetration job on Road No. 3, south of Lindsay, which was badly cracked, was given a special surface treatment of tar and sand with quite satisfactory results.

A steadily increased use of calcium chloride for both dust layer and stabilizing effect has produced some of the finest roads of this type in the province. Thirty miles have received two or three years' treatment, and seventeen miles were newly treated.

The ordinary gravel roads were maintained mechanically by Diesel power.

Township Roads — There was no work of notable character carried out in the five townships operating under the Highway Improvement Act, with the exception of Fenelon which cut a very steep hill (known as Dawson's Hill on the 1st Concession, 1½ miles north of Cambray) at a cost of $1,100.00.

DISTRICT NO. 8 — *Counties of Hastings and Prince Edward.*

Hastings — During the season two miles of plant mix bituminous material was laid on 2nd Concession of Thurlow Township. Drainage and grading work carried on to prepare several pieces of road for a permanent top. Completion of a one-half mile grade separation on Road No. 14 started late in 1936.

Maintenance work consisted of dust laying and resurfacing and general dragging carried on throughout the system.

Several bridges were painted and a floor replaced on Glen Miller Bridge.

Prince Edward — Four miles of bituminous retread was constructed. New grading and drainage in preparation for permanent top.

Maintenance work of dust laying, surface treating and gravelling and general dragging on gravel roads was carried on throughout the system.

District No. 9 — *Counties of Frontenac, Lennox and Addington, Leeds and Grenville.*

Frontenac — Four and one-half miles of road were graded, gravelled and treated with clay and calcium chloride to make a solid surface; 1.8 miles were surfaced with pre-mix asphalt and stone. All work was done day labour with machinery owned by the county.

For maintenance a new 7500-lb. pull grader, Timkin bearings and pneumatic tires was purchased which with the F. W. D. truck already owned made a great improvement on all unpaved roads.

Lennox and Addington — This county did not have enough money available to attempt any real construction so that, with the exception of 4 miles of grading, all monies were spent on maintenance.

A new power maintainer was purchased. Eleven miles of pavement were surface-treated and covered with stone chips manufactured at the county plant and 10 miles of gravel road was treated with calcium chloride and clay to make a good travel surface.

Leeds and Grenville — Five and one-quarter miles of pre-mix treatment were constructed by contract and three miles of gravel mulch were laid by day labour.

The roads were properly maintained. Four and one-quarter miles were surface treated with bitumin. Four miles were treated with calcium chloride tor dust prevention. The rest of the gravel roads were resurfaced with natural screened gravel, a gravel screen being located in each county.

District No. 10 —*Counties of Carleton, Lanark and Renfrew.*

Carleton — Widening of the Richmond Road through Westboro Village was continued and now only one short block remains to be done. On other narrow sections of Suburbxn Roads shoulder widening was also continued. The River Road was hard surfaced over a previously stabilized gravel base. The Suburban Commission bought a new four-ton truck and snow plough, giving them five snow ploughs for winter use.

The County continued to extend their light bituminous surfaces about five miles being laid this year.

Maintenance was well attended to on both county and suburban roads.

Lanark — Expenditure in this county was up a little this year, some construction work being undertaken. One mile of black top was laid and Tranktown-Prospect Road was stabilized with calcium chloride for a distance of 3 miles. The The Smiths Falls-Merrickville road was resurfaced for over a mile where the old black top had given way.

Maintenance on other roads was kept up and plans made for the construction of one or two bridges in 1938.

Renfrew — The major item in the county programme this year was the construction of the bridge over the Madawaska at Burnstown. This bridge is of steel on concrete piers and is 287 ft. over all. Improvement of the approaches to the bridge was made at the same time. A small concrete bridge was also built over the Gratton-Sebastopol Town line.

The balance of expenditure was on maintenance, which was well taken care of.

District No. 11 — *Counties of Prescott and Russell, Stormont, Dundas and Glengarry.*

Prescott and Russell — Due to damaging spring floods, a considerable outlay was necessary to replace and repair bridges.

Over the Castor River on the County Road No. 6, in the Village of Russell, a Warren Steel Truss Bridge was constructed on concrete abutments. This has an 87-foot span, 20-foot roadway and a 5-foot sidewalk.

In Longueuil Township a steel superstructure on concrete abutments having a 28-foot span and 20-foot roadway was built over Mill Creek.

To prevent ice jams in the Nation River an extra 50 feet was added to the span of the McGinnis Bridge, Plantagenet South Township.

Nine miles of county road were graded and seven miles metalled.

About 12,000 cu. yds. of gravel and stone were used in maintaining the entire system.

Stormont, Dundas and Glengarry — Nineteen miles of pre-mixed bituminous retread pavement were laid, and bituminous surface treatment was given to 21 miles.

Calcium chloride for dust prevention was used on 37 miles of county roads.

Snow clearing was maintained on 164 miles of county roads and 14 miles of snow fence were erected.

Gravel to the extent of 23,500 cu. yds. was used in maintaining gravel roads.

The 504.5 miles of county roads were well maintained throughout the season.

District No. 12 — *Provisional County of Haliburton, and District of Muskoka.*

Haliburton — Two miles of road was built between Donald and Haliburton, to eliminate a very heavy grade road not yet completed.

Six miles of road was constructed and gravelled into Grace Lake to open up timber limits and develop tourist country.

Two miles of road was graded and gravelled on Haliburton-Gooderham Road.

1.3 miles of road was constructed south of Gooderham on Buckhorn Road.

Fourteen miles of road was dragged, ditched and gravelled between Wilberforce and Highland Grove.

Considerable gravelling, ditching and culvert repairs were done on the Tory Hill-Cheddar Road.

Several bridges were rebuilt and repaired in the county.

Many sharp curves and bad hills were eliminated and maintenance work was efficiently carried out over the entire county.

Muskoka — Seven miles of road was graded, ditched and gravelled on the Rosseau-Huntsville Road.

Six miles of road was treated with calcium chloride through the Villages of Bala, Port Carling and Port Sydney.

Twelve miles of road was dragged, ditched and gravelled on Bracebridge-Fraserburg Townline Road.

Fourteen miles of road was dragged, ditched, gravelled and culverts repaired on South Falls-Clear Lake Road.

Many sharp curves and bad hills were eliminated in the district.

Maintenance work was efficiently carried out over the entire Muskoka District.

Fourteen bridges were repaired and 6 bridges rebuilt in Muskoka District.

District No. 13 — *District of Parry Sound.*

Parry Sound — Maintenance and repair was carried out over the whole system, and a notable improvement could be seen on all road surfaces. Many culverts and small bridges were repaired, or replaced, during the season.

ROAD CONFERENCE

The Twenty-Third Annual Road Conference was held on the 22nd and 23rd of February, 1937, in the Forresters' Hall, College Street, Toronto, and was largely attended by the various municipal officials.

A change was made for the 1938 Conference, and more commodious quarters were secured at the Royal York Hotel for February 21st and 22nd for the Twenty-Fourth Annual Conference. The actual registration of township road superintendents was 215 and of county superintendents 32. In addition to these, however, a great number of reeves and councillors and other parties interested in roads attended all sessions of the meeting, and it was generally agreed that the 1938 Conference was the most successful yet achieved.

In addition to the large Conference held in Toronto, several district conferences were held. In 1937 du? to rearrangement of districts only one such Conference was held. This took place on March 23rd and 24th in London for the Tenth consecutive year and was largely attended by the road superintendents of Elgin, Middlesex and Huron.

In 1938 three District Conferences were held. District No. 1, comprising the Counties of Essex, Kent and Lambton, gathered together on March 15th and 16th in Chatham for their Ninth Annual Conference; District No. 2, covering the Counties of Middlesex, Elgin, Norfolk and Oxford, met on March 10th and 11th in London for their Eleventh Annual Conference. District No. 3 initiated a conference in 1938 and carried it through with great success. The Counties of Huron, Perth, Waterloo and Wellington were represented and the meeting took place in Kitchener on March 30th and 31st. These smaller gatherings are very valuable supplements to the larger one and the friendly exchange of experiences in these districts thus made possible are believed by this Branch to be of great practical benefit to all those participating.

INDIAN RESERVES

During the year 1937 the expenditure made on Indian Reserves was $32,773.19 on which the Department subsidy amounted to $17,307.71. Thirteen Indian Reserves are participating in Departmental assistance under the Highway Improvement Act.

Indian Reserve	**Expenditure**
Alnwick	$ 397.21
Cape Croker	3,070.40
Caradoc	2,183.22
Kettle and Stoney Point	1,342.45
Moravian	197.63
Mud Lake	473.77
New Credit	1,362.43
Rice Lake	300.00
Sarnia	1,041.20
Saugeen	1,139.45
Six Nations	18,363.87
Tyendinaga	1,798.13
Walpole Island	1,103.43
	$ 32,773.19

CONCLUSION

The county engineers and superintendents of the various counties and suburban commissions along with the township road superintendents are making a great contribution to the improvement of municipal roads throughout Ontario, and this Department acknowledges with appreciation the kindly co-operation of all officials in this splendid work for the welfare of the people of Ontario.

Expenditures approved under authority of the Northern Development Act and the Colonization Roads Act with reference to agreements and by-laws were made during the fiscal year in the Electoral Districts of:

Algoma-Manitoulin, Cochrane North, Cochrane South, Temiskaming, Nipissing, Sudbury, Rainy River, Fort William, Port Arthur, Kenora, Sault Ste. Marie, Renfrew North, Renfrew South, Lanark, Leeds, Addington, Hastings East, Hastings West, Peterborough, Simcoe Centre, Simcoe East, Victoria, Muskoka-Ontario, Parry Sound.

All work carried out in the municipalities and unorganized townships in these districts was under the supervision of the Department Engineers, the District Engineers at Huntsville, Parry Sound, Port Hope, Bancroft, Brockville and Ottawa, and the Divisional Engineers at Kenora, Fort Frances, Fort William, Blind River, Sudbury, North Bay, New Liskeard, Matheson and Cochrane.

Direct Grants — Grants were made for the construction and maintenance of township roads in 116 organized municipalities and 23 unorganized townships, 1 Indian Reserve and 1 Organized Village.

The work accomplished is scheduled in Appendix 18.

By-law Work — 198 Municipalities passed agreements or by-laws whereby the Department contributed 50 per cent. of the cost of the approved work and the purchase of equipment. Seventy-seven municipalities had overseers and 135 municipalities had abolished statute labour.

The work performed is recorded in Appendix 19.

General — During the year, work carried by municipalities under the Northern Development agreements and Colonization Road By-laws was placed under the supervision of the Municipal Roads Branch and the areas in the organized counties of Simcoe, Victoria, Peterboro, Hastings, Frontenac, Lennox and Addington, Leeds and Grenville, Lanark and Renfrew were placed under the District Municipal Engineers and in addition District Engineers were placed at Huntsville for Muskoka and Haliburton and at Parry Sound for Parry Sound District, while the work north and west of the French River was supervised through the Division Engineers.

Numerous requests have been received from many of these 223 townships to operate under the Highway Improvement Act. Many townships have already abolished Statute Labour, and appointed overseers and with the proposed increased subsidy applicable, the Department looks for the majority of these townships to be operating under The Highway Improvement Act during 1938.

REPORT ON BRIDGES COMPLETED DURING YEAR 1937

Arthur Sedgwick, Chief Bridge Engineer

A large amount of bridge work was completed or undertaken during the year but this report has reference only to such contracts or works that were actually completed during the year under review. In all some 90 structures including bridges built on township roads in the northern districts were thus completed.

Special mention is made of the more important or larger structures as follows:

Beckett's Landing Bridge: — This structure is over the Rideau Canal on Highway No. 16 and replaces an old timber swing span with steel approach spans. The new bridge is a high level steel structure consisting of five 90-foot spans on concrete bents. High earth fills completed the approaches. The steel structure consists of a double span continuous truss on either side of a central simple span truss. Foundations were carried down to rock bottom through 20 feet of water.

Brewery Bridge: — This is a double 75-foot concrete arch bridge over Kettle Creek on Highway No. 4. The existing concrete arches were widened to a thirty foot roadway by means of rigid frame construction.

Canard River Bridge: — This is a new bridge consisting of five 50-foot steel girder spans on creosoted timber pile trestles on Highway No. 18. The new bridge eliminates a bad turn at either end of the existing 200-foot span.

Humber River (West Branch) Bridge: — This is a bridge on the new No. 27 Highway consisting of a 120-foot double rib concrete arch with cantilever ends without abutment walls.

Hurontario Clover Leaf: — This is a twin span rigid frame structure over the new Toronto-Hamilton dual highway with two 33-foot spans and cantilevered wingwalls.

Mattawishquia River Bridge: — This is a new concrete bridge two miles east of Hearst and consists of two 90-foot concrete girder spans with a 28-foot cantilever span on each end.

Meadowside Bridge: — This is a steel deck structure consisting of one 90-foot truss and two 30-foot approach spans on Highway No. 17 in Beaucage Township.

Morrisburg Subway: — This is a 42-foot concrete subway under the C. N. R. on Highway No. 31 eliminating a level crossing at Morrisburg.

Nipigon Bridge: — This is a high level bridge and viaduct over the Nipigon River on Highway No. 17. It consists of one 220-foot span over the river, five 93-foot spans and one 31-foot span. The main span rests on concrete piers. The remaining spans rest on steel towers and concrete abutments. The completion of this structure permitted traffic to operate between Port Arthur and Schreiber and thereby constitutes an important connecting link in Highway No. 17.

Queen's Bridge: — This is a twin 80-foot concrete arch bridge over the Kettle Creek, near the Brewery Bridge previously referred to and is of similar construction.

Thamesville Bridge: — This is a steel structure over the Thames River on Highway No. 21. It is of the continuous truss type consisting of one 160-foot central span with side spans of 80 feet each. This type of design permitted the steel to be erected in the winter with little or no falsework and without risk of winter floods damaging the same.

Walkerton Bridge: — This is a multiple span reinforced concrete rigid frame girder bridge with cantilever end spans and without abutments. The new structure replaces an old steel structure over the Saugeen River on Highway No. 4 in the town of Walkerton.

A serious spring flood washed away or seriously damaged several old structures in Old Ontario and necessitated the immediate building of new structures in their place.

A complete list of all the structures completed with their type, length and location is appended hereto.

APPENDICES

Nos. 1 to 19

APPENDIX No. 1
GROSS EXPENDITURES BY COUNTIES AND DISTRICTS
April 1, 1937, to March 31, 1938

County	Construction	Maintenance	Total
BRANT:—			
Highway No. 2	$ 6,895.61	$ 15,301.98	$ 22,197.59
" No. 5	8,915.64	3,341.27	12,256.91
" No. 24	5,295.38	10,868.85	16,164.23
" No. 24A	94.40	2,077.57	2,171.97
" No. 53	262,102.04	3,837.60	265,939.64
River Road	12,747.64	3,253.36	16,001.00
Total	$ 296,050.71	$ 38,680.63	$ 334,731.34
BRUCE:—			
Highway No. 4	$ 18,882.54	$ 12,721.51	$ 31,604.05
" No. 9	909.15	9,497.37	10,406.52
" No. 21	365,358.35	31,484.32	396,842.67
" No. 86	1,331.93	953.83	2,285.76
Tobermory Road	3,312.23	3,947.99	7,260.22
Total	$ 389,794.20	$ 58,605.02	$ 448,399.22
CARLETON:—			
Highway No. 15	$ 1,760.93	$ 9,169.20	$ 10,930.13
" No. 16	38,709.43	7,939.51	46,648.94
" No. 17	10,757.46	16,613.70	27,371.16
" No. 29	3,764.97	994.57	4,759.54
" No. 31	55,437.52	21,535.53	76,973.05
Total	$ 110,430.31	$ 56,252.51	$ 166,682.82
DUFFERIN:—			
Highway No. 9	$ 1,751.10	$ 5,581.47	$ 7,332.57
" No. 10	3,391.32	12,146.82	15,538.14
" No. 24	51.20	52.47	103.67
Shelburne-Stayner	692.97	3,316.35	4,009.32
Primrose-Cookstown	375.76	8,744.63	9,120.39
Total	$ 6,262.35	$ 29,841.74	$ 36,104.09
ELGIN:—			
Highway No. 3	$ 82,929.25	$ 20,663.84	$ 103,593.09
" No. 4	65,866.00	4,415.03	70,281.03
" No. 19	304,465.68	9,553.05	314,018.73
" No. 73	68,815.96	2,112.02	70,927.98
" No. 74	628.09	2,289.39	2,917.48
" No. 75	168,458.77	394.47	168,853.24
" No. 76	167,511.79	299.49	167,811.28
" No. 77	46,857.16	406.43	47,263.59
Total	$ 905,532.70	$ 40,133.72	$ 945,666.42
ESSEX:—			
Highway No. 2	$ 64,580.33	$ 5,410.90	$ 69,991.23
" No. 2A	1,551.30	5,476.14	7,027.44
" No. 3	189,449.74	6,730.49	196,180.23
" No. 3B	40,819.81	1,240.20	42,060.01
" No. 18	19,915.67	6,510.23	26,425.90
" No. 18A	434.01	....	434.01
" No. 39	6,652.51	5,284.54	11,937.05
Pelee Island	12,740.65	421.89	13,162.54
Parent Boulevard	16.51	....	16.51
Ruthven to Highway No. 18	6.03	....	6.03
Michigan Central Side Road	121.20	....	121.20
Total	$ 336,287.76	$ 31,074.39	$ 367,362.15

County	Construction	Maintenance	Total
FRONTENAC:—			
Highway No. 2	$ 40,160.08	$ 21,192.87	$ 61,352.95
" No. 7	39,113.66	35,427.26	74,540.92
" No. 15	3,681.84	18,073.51	21,755.35
" No. 33	57,935.27	1,340.71	59,275.98
" No. 38	262,939.52	14,277.95	277,217.47
" No. 95	2,191.45	4,723.52	7,214.97
" No. 96	5,643.08	17,042.30	22,685.38
Howe Island	....	2,305.80	2,305.80
Fort Henry	481,467.50	....	481,467.50
Secondary Roads —			
Fort Henry	32,994.94	....	32,994.94
Pickett's Ferry Road	335.99	....	335.99
Tamworth-Arden Road	....	1,665.22	1,665.22
Parham-Mountain Grove	....	3,337.79	3,337.79
Arden Road	2,766.62	47.95	2,814.57
Myers Cave-Ompah-Levant	16,420.27	6,746.78	23,167.05
Vennacher-Ardoch-Clarendon	1,191.74	....	1,191.74
Snyder Depot-Marble Lake	80.50	267.72	348.22
Total	$ 947,222.46	$ 126,449.38	$ 1,073,671.84
GREY:—			
Highway No. 4	$ 116,652.01	$ 24,996.60	$ 141,648.61
" No. 6	2,943.69	16,766.38	19,710.07
" No. 10	339,052.56	9,910.78	348,963.34
" No. 21	73,402.23	2,649.18	76,051.41
" No. 26	22,991.39	13,838.10	36,829.49
Shelburne-Stayner	240.25	1,103.97	1,344.22
Tobermory Road	493.13	587.99	1,081.12
Total	$ 555,775.26	$ 69,853.00	$ 625,628.26
HALDIMAND:—			
Highway No. 3	$ 6,660.31	$ 20,456.50	$ 27,116.81
" No. 6	45,707.42	9,355.75	55,063.17
Darkie Side Road	5,863.94	1,442.49	7,306.43
River Road	4,791.56	7,695.15	12,486.71
Total	$ 63,023.23	$ 38,949.89	101,973.12
HALTON:—			
Highway No. 2	$ 15,974.63	$ 7,443.33	$ 23,417.96
" No. 2B	283,791.62	1,248.78	285,040.40
" No. 5	4,763.50	11,290.87	16,054.37
" No. 7	362.40	7,430.15	7,792.55
" No. 25	781,755.95	15,288.89	797,044.84
" No. Q	289,162.38	4,204.12	293,366.50
Preliminary Survey	3,553.21	....	3,553.21
Total	$ 1,379,363.69	$ 46,906.14	$ 1,426,269.83
HASTINGS:—			
Highway No. 2	$ 64,450.22	$ 10,374.26	$ 74,824.48
" No. 7	16,685.79	27,675.22	44,361.01
" No. 14	157,549.13	18,568.57	176,117.70
" No. 28	38,163.20	1,444.40	39,607.60
" No. 33	785.54	1,509.36	2,294.90
" No. 37	67,962.78	15,705.50	83,669.28
" No. 62	476,132.47	10,595.64	486,728.11
Secondary Roads —			
Maynooth to Lake St. Peter	3,260.87	23.30	3,284.17
Bird's Creek-Baptiste Lake	385.81	836.54	1,222.35
Monck Road	573.20	....	573.20
Long Swamp Road	557.07	....	557.07
Town Line Road	527.90	....	527.90
Coe Hill North	3,872.72	....	3,872.72
Mill Bridge Highway No. 62	3,128.44	....	3,128.44
Bancroft-Hermon-Denbigh	6,347.88	980.77	7,328.65

County	Construction	Maintenance	Total
Hermon-Fort Stewart-Combermere	$ 4,858.55	$ 1,318.87	$ 6,177.42
Maynooth-Madawaska	84.80	392.58	477.38
Hyhla-New Carlo	4,088.91	....	4,088.91
Gilmore, Highway No. 62	2,489.81	....	2,489.81
Turriff Road	602.61	....	602.61
Total	$ 852,507.70	$ 89,426.01	$ 941,933.71
HURON: —			
Highway No. 4	$ 213,022.47	$ 16,142.72	$ 229,165.19
" No. 8	2,805.91	6,390.43	9,196.34
" No. 9	68.53	521.41	589.94
" No. 21	233,049.74	23,539.63	256,589.37
" No. 23	16,525.97	1,420.52	17,946.49
" No. 81	190.64	623.28	813.92
" No. 83	15.00	203.79	218.79
" No. 84	5.00	....	5.00
" No. 86	7,140.19	3,186.15	10,326.34
" No. 87	2,445.44	1,339.34	3,784.78
Total	$ 475,268.89	$ 53,367.27	$ 528,636.16
KENT: —			
Highway No. 2	$ 266,643.09	$ 9,634.74	$ 276,277.83
" No. 2A	111.76	Cr. 678.32	Cr. 566.56
" No. 3	5,486.18	10,168.55	15,654.73
" No. 21	320,656.61	8,560.82	329,217.43
" No. 40	299,360.03	5,732.54	305,092.57
" No. 78	5.05	....	5.05
" No. 79	868.92	85.68	954.60
Total	$ 893,131.64	$ 33,504.01	$ 926,635.65
LAMBTON: —			
Highway No. 7	$ 89,317.83	$ 17,795.87	$ 107,113.70
" No. 21	71,348.88	17,524.66	88,873.54
" No. 21A	320,703.39	8,881.64	329,585.03
" No. 22	121.10	2,546.46	2,667.56
" No. 40	347,722.91	14,331.34	362,054.25
" No. 79	22,489.35	616.41	23,105.76
" No. 80	132.57	924.44	1,057.01
Lakeshore Road	549.95	....	549.95
International Bridge	437,901.88	....	437,901.88
Total	$ 1,290,287.86	$ 62,620.82	$ 1,352,908.68
LANARK: —			
Highway No. 7	$ 148,240.78	$ 35,373.41	$ 183,614.19
" No. 15	26,714.59	18,612.37	45,326.96
" No. 29	120,391.49	23,919.40	144,310.89
Secondary Roads —			
Calabogie to Lanark Town Line	7,345.88	499.58	7,845.46
Total	$ 302,692.74	$ 78,404.76	$ 381,097.50
LEEDS AND GRENVILLE: —			
Highway No. 2	$ 370,810.99	$ 34,575.25	$ 405,386.24
" No. 15	1,885.42	16,367.71	18,253.13
" No. 16	30,273.77	10,489.39	40,763.16
" No. 29	2,002.62	10,438.40	12,441.02
" No. 32	7,716.37	7,735.79	15,452.16
" No. 42	23,452.13	10,369.06	33,821.19
St. Lawrence River Road	524,535.16	402.20	524,937.36
Secondary Roads —			
Elgin to Chaffey's Locks	....	4,867.45	4,867.45
Total	$ 960,676.46	$ 95,245.25	$ 1,055,921.71

County	Construction	Maintenance	Total
LENNOX AND ADDINGTON: —			
Highway No. 2	$ 916.40	$ 12,222.14	$ 13,138.54
" No. 7	2,484.20	7,386.80	9,871.00
" No. 33	353,024.42	4,849.00	357,873.42
" No. 41	145,888.57	31,982.48	177,871.05
Amherst Island	6,761.55	....	6,761.55
Secondary Roads —			
Tamworth-Arden	....	1,458.46	1,458.46
Total	$ 509,075.14	$ 57,898.88	$ 566,974.02
LINCOLN: —			
Highway No. 8	$ 97,425.94	$ 12,122.89	$ 109,548.83
" No. 8A	216.30	939.75	1,156.05
" No. 20	10,550.64	12,110.49	22,661.13
New Niagara Falls Road	883,272.49	200.83	883,473.32
Preliminary Survey	5,329.82	....	5,329.82
Total	$ 996,795.19	$ 25,373.96	$ 1,022,169.15
MIDDLESEX: —			
Highway No. 2	$ 28,584.99	$ 17,044.15	$ 45,629.14
" No. 4	2,286.79	10,784.40	13,071.19
" No. 7	89,858.44	17,385.23	107,243.67
" No. 22	40,067.18	10,038.44	50,105.62
" No. 23	19,200.46	2,338.54	21,539.00
" No. 73	1,096.54	1,062.13	2,158.67
" No. 74	91,708.09	1,644.85	93,352.94
" No. 80	284.65	6,547.73	6,832.38
" No. 81	140,854.54	20,009.14	160,863.68
Total	$ 413,941.68	$ 86,854.61	$ 500,796.29
NORFOLK: —			
Highway No. 3	$ 275.89	$ 6,592.22	$ 6,868.11
" No. 6	712.40	5,688.52	6,400.92
" No. 19	61.70	1,221.02	1,282.72
" No. 24	21,730.44	27,137.78	48,868.22
" No. 53	175.05	878.46	1,053.51
Total	$ 22,955.48	$ 41,518.00	$ 64,473.48
NORTHUMBERLAND AND DURHAM: —			
Highway No. 2	$ 14,412.99	$ 52,627.45	$ 67,040.44
" No. 28	1,854.00	11,087.23	12,941.23
" No. 30	187,784.19	18,951.53	206,735.72
" No. 33	695.12	1,600.32	2,295.44
" No. 45	9,079.90	3,376.85	12,456.75
Total	$ 213,826.20	$ 87,643.38	$ 301,469.58
ONTARIO: —			
Highway No. 2	$ 56,213.84	$ 33,347.12	$ 89,560.96
" No. 7	45,015.18	4,041.73	49,056.91
" No. 12	407,284.59	29,203.89	436,488.48
" No. 47	11,382.48	102.19	11,484.67
" No. 48	4,317.06	2,557.70	6,874.76
Total	$ 524,213.15	$ 69,252.63	$ 593,465.78
OXFORD: —			
Highway No. 2	$ 113,125.70	$ 23,032.40	$ 136,158.10
" No. 3	32,125.30	4,238.84	36,364.14
" No. 19	18,218.51	10,737.09	28,955.60
" No. 53	9,988.11	1,314.06	11,302.17
" No. 59	3,561.87	14,728.86	18,290.73
Total	$ 177,019.49	$ 54,051.25	$ 231,070.74

County	Construction	Maintenance	Total
PEEL:—			
Highway No. 2	$ 15,792.44	$ 5,550.56	$ 21,343.00
“ No. 5	3,175.06	8,539.85	11,714.91
“ No. 7	424.58	5,078.44	5,503.02
“ No. 9	61,565.36	1,957.79	63,523.15
“ No. 10	10,891.69	25,481.54	36,373.23
“ No. 24	1,795.48	2,466.24	4,261.72
“ No. 50	76,150.50	1,234.14	77,384.64
“ No. A	729,094.47	6,004.37	735,098.84
Total	$ 898,889.58	$ 56,312.93	$ 955,202.51
PERTH:—			
Highway No. 7	$ 2,696.82	$ 5,505.48	$ 8,202.30
“ No. 8	24,265.42	22,935.44	47,200.86
“ No. 19	231,390.95	9,321.29	240,712.24
“ No. 23	37,671.40	17,822.29	55,493.69
“ No. 83	....	30.45	30.45
“ No. 86	2,550.87	2,074.21	4,625.08
Total	$ 298,575.46	$ 57,689.16	$ 356,264.62
PETERBOROUGH:—			
Highway No. 7	$ 224,479.84	$ 22,788.16	$ 247,268.00
“ No. 28	79,469.50	24,005.11	103,474.61
“ No. 30	2,003.22	1,632.83	3,636.05
“ No. 36	69,388.25	1,380.13	70,768.38
“ No. 45	2,084.48	775.20	2,859.68
Secondary Roads —			
Apsley-Haliburton County Line Chandos, Loon Lake	52,301.49	3,943.96	56,245.45
Bobcaygeon-Kinmount	11,847.35	728.40	12,575.75
Highway No. 36, Catchacoma, Haliburton County Line	4,923.96	595.36	5,519.32
Kosh Lake Road	445.65	....	445.65
South Lake Road	395.51	....	395.51
Old Church Line	6,293.31	....	6,293.31
Mining Roads —			
Project No. 37–19	7,014.02	....	7,014.02
Nepheline Road	653.14	....	653.14
Flint and Spar Road	10,953.58	....	10,953.58
Total	$ 472,253.30	$ 55,849.15	$ 528,102.45
PRESCOTT AND RUSSELL:—			
Highway No. 17	$ 203,079.97	$ 15,153.43	$ 218,233.40
“ No. 34	177,749.37	5,574.31	183,323.68
Total	$ 380,829.34	$ 20,727.74	$ 401,557.08
PRINCE EDWARD:—			
Highway No. 14	$ 63,861.59	$ 10,913.42	$ 74,775.01
“ No. 33	42,970.83	16,520.63	59,491.46
Total	$ 106,832.42	$ 27,434.05	$ 134,266.47
RENFREW:—			
Highway No. 17	$ 208,547.26	$ 66,468.21	$ 275,015.47
“ No. 29	395.86	95.47	491.33
“ No. 41	81,481.96	6,982.19	88,464.15
“ No. 60	140,166.21	26,396.61	166,562.82
“ No. 62	63,572.87	11,670.22	75,243.09

County	Construction	Maintenance	Total
Secondary Roads —			
Brougham Twp. Line to Burnstown	$ 9,606.32	$ 3,827.35	$ 13,433.67
Pembroke to Alice Twp. Line	....	97.68	97.68
Madawaska-Cross Lake	2,531.08	1,163.97	3,695.05
Whitney-Hastings Boundary	2,256.12	591.44	2,847.56
Killaloe-Forestry Station	159.30	242.81	402.11
Combermere-Quadrille-Foymount	9,786.76	3,285.38	13,072.14
Wilno-Rockingham-Brudenell-Opeongo	14,196.83	5,049.43	19,246.26
Killaloe-Ruby-Eganville	9,851.74	1,756.00	11,607.74
Eganville-Rochefort-Cormac	3,537.25	641.54	4,178.79
Jewellville-Rosenthal	2,865.59	979.32	3,844.91
Douglas-Dacre	1,201.36	1,203.26	2,404.62
Calabogie-Black Donald	279.68	234.94	514.62
Rochefort-Cormac	....	948.26	948.26
Township Roads —			
Petawawa Township	1,238.23	....	1,238.23
Buchanan Township	43.25	9.18	52.43
Wylie Township	4.55	....	4.55
Maria Township	147.09	....	147.09
Cameron Township	923.52	....	923.52
Total	$ 552,792.83	$ 131,643.26	$ 684,436.09
SIMCOE: —			
Highway No. 9	$ 61,377.09	$ 1,713.05	$ 63,090.14
" No. 11	49,626.91	32,596.43	82,223.34
" No. 12	150,006.09	21,892.21	171,898.30
" No. 26	7,952.14	19,873.05	27,825.19
" No. 27	176,164.97	26,980.88	203,145.85
" No. 69	17,875.76	3,849.39	21,725.15
" No. 90	....	33.60	33.60
" No. 92	23,292.55	5,860.20	29,152.75
Primrose-Cookstown	80,134.61	7,572.28	87,706.89
Shelburne-Stayner	1,229.00	5,525.40	6,754.40
Secondary Roads —			
Highway No. 12A	3,343.13	3,617.24	6,960.37
Total	$ 571,002.25	$ 129,513.73	$ 700,515.98
STORMONT, DUNDAS AND GLENGARRY: —			
Highway No. 2	$ 7,390.61	$ 32,223.26	$ 39,613.87
" No. 31	26,846.65	5,304.80	32,151.45
" No. 34	190,438.47	10,321.50	200,759.97
" No. 43	34,077.50	....	34,077.50
Total	$ 258,753.23	$ 47,849.56	$ 306,602.79
VICTORIA: —			
Highway No. 7	$ 203,653.52	$ 18,736.64	$ 222,390.16
" No. 35	63,003.74	22,745.02	85,748.76
" No. 36	186,422.83	7,614.83	194,037.66
" No. 46	20,908.20	5,780.34	23,688.54
Secondary Roads —			
Fenelon Falls-Burnt River	40,463.83	5,844.36	46,308.19
Bobcaygeon-Kinmount	11,847.34	728.39	12,575.73
Kirkfield-Dalrymple-Sebright	15,166.57	3,399.29	18,565.86
Dawson's Road	1,161.90	....	1,161.90
Emily Lake Road	1,042.40	....	1,042.40
Total	$ 543,670.33	$ 64,848.87	$ 608,519.20

County	Construction	Maintenance	Total
WATERLOO:—			
Highway No. 7	$ 3,319.45	$ 2,993.38	$ 6,312.83
“ No. 8	328,243.62	12,610.03	340,853.65
“ No. 24	3,393.97	3,344.04	6,738.01
“ No. 24A	111.36	1,587.27	1,698.63
“ No. 85	72,597.39	3,407.10	76,004.49
“ No. 86	1,967.81	1,136.31	3,104.12
Total	$ 409,633.60	$ 25,078.13	$ 434,711.73
WELLAND:—			
Highway No. 3	$ 938.83	$ 10,464.05	$ 11,402.88
“ No. 3A	97,205.25	4,409.48	101,614.73
“ No. 8	651.89	1,038.38	1,690.27
“ No. 20	10,351.25	6,345.70	16,696.95
New Niagara Falls Road	94,492.76	82.04	94,574.80
Canal Road	247.36	1,554.64	1,802.00
Dominion Road	811.78	2,769.74	3,581.52
Preliminary Survey	1,776.60	....	1,776.60
Total	$ 206,475.72	$ 26,664.03	$ 233,139.75
WELLINGTON:—			
Highway No. 6	$ 4,424.57	$ 17,441.01	$ 21,865.58
“ No. 7	2,818.61	7,640.26	10,458.87
“ No. 9	1,708.64	11,014.11	12,722.75
“ No. 23	60.90	1,122.60	1,183.50
“ No. 24	4,361.62	10,209.70	14,571.32
“ No. 86	1,881.57	1,267.33	3,148.90
“ No. 87	859.19	468.84	1,328.03
Total	$ 16,115.10	$ 49,163.85	$ 65,278.95
WENTWORTH:—			
Highway No. 2	$ 70,244.57	$ 19,963.38	$ 90,207.95
“ No. 2B	....	402.81	402.81
“ No. 5	2,544.31	8,366.30	10,910.61
“ No. 5A	....	348.99	348.99
“ No. 6	79,679.64	7,995.44	87,675.08
“ No. 8	8,132.21	14,493.20	22,625.41
“ No. 20	182,829.20	11,319.86	194,149.06
“ No. 20A	5,096.36	5,050.48	10,146.84
“ No. 25	....	186.57	186.57
Hamilton-Dundas New Road	263,819.36	645.40	264,464.76
New Niagara Falls Road	218,410.16	....	218,410.16
Preliminary Survey	7,106.42	....	7,106.42
Total	$ 837,862.23	$ 68,772.43	$ 906,634.66
YORK:—			
Highway No. 2	$ 606,841.92	$ 9,553.73	$ 616,395.65
“ No. 5	54,189.52	4,516.01	58,705.53
“ No. 7	25,167.35	15,028.46	40,195.81
“ No. 9	409.90	734.17	1,144.07
“ No. 11	53,635.21	27,479.49	81,114.70
“ No. 27	439,858.92	8,502.11	448,361.03
“ No. 49	1,966.31	956.50	2,922.81
“ No. Q	111,813.84	6,558.31	118,372.15
Total	$1,293,882.97	$ 73,328.78	$1,367,211.75

GROSS EXPENDITURES BY COUNTIES AND DISTRICTS

District	Construction	Maintenance	Total
HALIBURTON:—			
Highway No. 28	$ 268.25	....	$ 268.25
" No. 35	9,805.08	29,143.23	38,948.31
" No. 60	3,435.40	1,734.54	5,169.94
Secondary Roads —			
Kinmount-Bancroft	80,258.38	6,792.97	87,051.35
Minden-Kinmount	5,964.28	3,832.32	9,796.60
Minden-Haliburton-Redstone Lake	8,578.90	9,165.97	17,744.87
Carnarvon-Haliburton	2,115.65	3,428.74	5,544.39
Haliburton-Wilberforce	67,108.44	6,689.45	73,797.89
Total	$ 177,534.38	$ 60,787.22	$ 238,321.60
MUSKOKA:—			
Highway No. 11	$ 358,439.04	$ 45,937.61	$ 404,376.65
" No. 35	8,094.10	5,395.50	13,489.60
" No. 60	30,596.79	14,657.76	45,254.55
" No. 69	190,002.25	4,812.98	194,815.23
Secondary Roads —			
Huntsville-Baysville	77,987.36	5,910.64	83,898.00
Bracebridge-Dorset	54,483.67	21,292.09	75,775.76
Bracebridge-Glen Orchard	61,088.81	13,620.53	74,709.34
Rosseau-Parry Sound Road	4,373.95	32,289.42	36,663.37
Utterson Road	1,777.00	9,843.00	11,620.00
Windermere Road	12,520.01	7,897.75	20,417.76
Township Roads —			
Baxter Township	14,667.23	1,333.90	16,001.13
Muskoka Township	2,280.66	....	2,280.66
Sinclair Township	10,510.88	....	10,510.88
Total	$ 826,821.75	$ 162,991.18	$ 989,812.93
PARRY SOUND:—			
Highway No. 11	606,222.48	$ 41,877.18	$ 648,099.66
" No. 69	755,999.62	24,638.42	780,638.04
Secondary Roads —			
Sand Lake-Parry Sound Road	14,444.67	11,155.38	25,600.05
Seguin Falls-North Seguin	....	1,091.53	1,091.53
Hayes Corners-Rosseau	329.06	8,847.51	9,176.57
Waubamic-Bookview-Lorimer Lake	....	29.23	29.23
Dunchurch-Ardbeg	370.28	3,267.29	3,637.57
Burks Falls-Parry Sound	9,716.35	30,533.16	50,249.51
Sundridge-Magnetewan	155.18	9,830.71	9,985.89
South River-Eagle Lake	....	580.57	580.57
Trout Creek-Loring	8,010.50	23,223.83	31,234.33
Powassan-Restoule	531.76	15,151.40	15,683.16
Powassan-Chisholm Road	10.08	1,263.10	1,273.18
Lighthouse Beach Road	....	319.44	319.44
Township Roads —			
Nipissing Township	43.02	....	43.02
Hanson Township	2,582.07	....	2,582.07
Chapman Township	74.21	....	74.21
Ryerson Township	82.85	....	82.85
	$ 1,408,572.13	$171,808.75	$ 1,580,380.88
NIPISSING:—			
Highway No. 11	$ 893,123.69	$ 24,529.84	$ 917,653.53
" No. 17	608,763.88	68,022.77	676,786.65
" No. 60	86,619.45	1,984.99	88,604.44
" No. 63	63,434.37	16,962.61	80,396.98
" No. 64	30,194.98	21,041.52	51,236.50
Preliminary Survey	2,028.53	....	2,028.53

District	Construction	Maintenance	Total
Nipissing:- (Cont'd)			
Secondary Roads —			
Mattawa-Temiskaming	27,504.15	133.03	27,367.18
Mattawa-Callander	197.12	6,917.80	7,114.92
Field-Verner-Lavigne	6,064.38	4,295.49	10,359.87
Field-River Valley-Afton Mine	2,793.35	2,542.85	5,336.20
River Valley-Warren	4,427.55	2,736.42	7,163.97
Hagar-Rutter-Bigwood-Wolseley Bay	12,441.31	13,448.03	25,889.34
Callander-Junction Highway No. 17	141,233.61	4,431.37	145,664.98
Afton Mine Road Project No. 26	9,407.73	....	9,407.73
Township Roads —			
Phelps Township	1,938.43	274.60	2,213.03
Grant Township	1,182.75	....	1,182.75
Bastedo Township	364.68	....	364.68
Gibbons Township	498.50	22.96	521.46
Bagerow Township	1,621.35	11.40	1,632.75
Crerar Township	1,088.52	....	1,088.52
Hugel Township	1,669.54	344.37	2,013.91
Kirkpatrick Township	3,943.19	857.69	4,700.88
McPherson Township	3,875.09	120.49	3,995.58
Louden Township	595.28	....	595.28
Falconer Township	766.27	....	766.27
Scollard Township	2,565.50	....	2,565.50
Haddo Township	127.30	....	127.30
Henry Township	1,133.63	....	1,133.63
Hoskins Township	2.80	....	2.80
Delamere Township	3,595.67	162.72	3,758.39
Bigwood Township	1,408.44	....	1,408.44
Boulter Township	604.06	....	604.06
Pedley Township	1,366.92	....	1,366.92
Hendrie Township	12.30	....	12.30
Papineau Township	171.60	....	171.60
Mattawan Township	686.90	....	686.90
Calvin Township	4,891.60	....	4,891.60
Bonfield Township	2,570.52	....	2,570.52
Chisholm Township	2,539.94	289.40	2,829.34
East Ferris Township	590.56	....	590.56
West Ferris Township	77.45	....	77.45
Widdifield Township	1,493.56	10.80	1,504.36
Springer Township	877.52	....	877.52
Field Township	270.30	79.75	350.05
Caldwell Township	1,028.79	....	1,028.79
Ratter and Dunnet Townships	1,589.71	....	1,589.71
Casimir, Appelby and Jennings Twps.	2,321.78	....	2,321.78
Mason and Cosby Townships	936.84	....	936.84
Martland Townships	1,079.47	....	1,079.47
Total	$1,937,620.86	$ 169,220.90	$2,106,841.76
TEMISKAMING: —			
Highway No. 11	$1,670,717.74	$ 108,334.20	$1,779,051.94
" No. 65	31,098.54	77,284.58	108,383.12
Secondary Roads —			
Cuniptau Mines Road	3,919.24	115.70	4,034.94
Lorrain Road	1,519.41	4,306.78	5,826.19
Haileybury West Road	1,490.74	3,403.61	4,894.35
North Temiskaming Road	4,216.65	9,277.52	13,494.17
Dawson's Point Road	1,041.58	....	1,041.58
Casey-Brethour Road	1,538.13	3,540.36	5,078.49
Greenwood's Bridge Road	578.55	1,172.24	1,750.79
Earlton-Hilliardton Road	854.49	1,169.98	2,024.47
North Road	4,242.35	4,454.86	8,697.21
Wendigo Road	....	123.90	123.90
Englehart-Skead Road	589.22	....	589.22

District	**Construction**	**Maintenance**	**Total**
Temiskaming:- (Cont'd)			
Secondary Roads —			
Krugerdorf Road	1,560.99	391.82	1,952.81
Boston Creek Road	575.41	275.07	850.48
Belle Vallee Road	....	36.21	36.21
Charlton Road	1,573.21	4,320.08	5,893.29
Savard-Robillard Boundary Road	....	162.29	162.29
Charlton-Elk Lake Road	9,827.01	7,058.87	16,885.88
Brentha Road	436.97	354.92	791.89
Earlton West Road	217.63	751.62	969.25
Milberta Road	2,213.79	2,403.51	4,617.30
Uno Park Road	522.24	231.04	753.28
McCool Road	1,090.02	520.84	1,610.86
Matachewan-Ashley Mines Road	24,136.90	3,869.21	28,006.11
Rahn Lakes Mines Road	1,724.65	....	1,724.65
Gowganda Road	10,429.49	10,713.71	21,143.20
Silverada Road	2,439.12	298.64	2,737.76
Bestel Road	....	748.27	748.27
Gowganda-Westree Road	39,822.10	537.77	40,359.87
Townships —			
Lorrain Township	669.11	1,043.00	1,712.11
Firstbrooke Township	1,225.65	566.28	1,791.93
Ingram Township	2,425.66	1,327.21	3,752.87
Pense Township	4,384.93	....	4,384.93
Marter Township	4,891.45	831.73	5,723.18
Pacaud Township	3,847.53	192.71	4,040.24
Catherine Township	174.61	288.63	463.24
Robillard Township	3,819.93	468.11	4,288.04
Sharpe Township	189.55	1,171.10	1,360.65
Savard Township	2,975.62	1,415.56	4,391.18
Bryce Township	6,674.34	149.86	6,824.20
Beauchamp Township	3,349.20	423.55	3,772.75
Henwood Township	9,203.22	704.10	9,907.32
Cane Township	5,276.68	140.30	5,416.98
Barber Township	1,327.23	....	1,327.23
Tudhope Township	1,045.11	15.70	1,060.81
Marquis Township	4,840.15	1,447.20	6,287.35
Otto Township	6,235.25	252.64	6,487.89
Eby Township	8,478.19	555.76	9,033.95
Hearst Township	51,600.68	....	51,600.68
Smythe Township	416.74	....	416.74
Bucke Township	1,234.53	....	1,234.53
Harris Township	94.93	280.98	375.91
Dymond Township	469.55	....	469.55
Casey Township	1,584.38	10.90	1,595.28
Harley Township	....	9.97	9.97
Kerns Township	3,461.71	319.69	3,781.40
Brethour Township	134.08	484.16	618.24
Hilliard Township	1,365.95	703.49	2,069.44
Evanturel Township	2,052.98	15.31	2,068.29
Dack Township	889.88	445.26	1,335.14
Chamberlain Township	59.25	174.32	233.57
Total	$1,952,774.24	$ 259,295.12	$2,212,069.36
SOUTH COCHRANE:—			
Highway No. 11	$ 217,243.01	$ 78,359.74	$ 295,602.75
" No. 66	44,112.13	45,688.75	89,800.88
" No. 67	430,862.26	33,783.03	464,645.29
Secondary Roads —			
Goldthorpe Road	2,851.80	5,749.25	8,601.05
Old Road, Ramore to Matheson	....	468.71	468.71
Munro Road	....	1,000.70	1,000.70
Matheson to Connaught	173,639.73	20,876.10	194,515.83
Barber's Bay to Shillington	60,212.19	....	60,212.19
Porquis Junct. to Iroquois Falls	244.37	1,179.15	1,423.52
South Rd. Golden City to Timmins	4,912.55	8,565.52	13,478.07
Shillington to Nellie Lake	9,786.53	9,864.03	19,650.56
Goodfish Road	574.47	2,921.39	3,495.86

District	Construction	Maintenance	Total
South Cochrane:- (Cont'd)			
Township Roads —			
McGarry, McVittie, Gauthier and Lebel Townships	1,795.29	2,214.86	4,010.15
Grenfell Township	....	519.53	519.53
Maisonville Township	2,165.93	....	2,165.93
Benoit Township	5,247.75	90.43	5,338.18
Miscellaneous Townships	....	1,261.73	1,261.73
Hislop Township	1,381.17	9,026.80	10,407.97
Beatty Township	3,540.81	2,674.16	6,214.97
Bowman Township	1,701.17	5,514.34	7,215.51
Currie Township	9,412.17	5,855.70	15,267.87
Bond Township	2,125.91	274.36	2,400.27
Carr Township	2,786.93	10,339.42	13,126.35
Taylor Township	6,352.58	6,762.57	13,115.15
Stock Township	5,270.05	2,387.12	7,657.17
German Township	2,077.80	....	2,077.80
Walker Township	3,390.51	97.92	3,488.43
Clergue Township	3,805.86	222.92	4,028.78
Dundonald Township	6,561.02	....	6,561.02
McCart Township	6,944.68	3,340.72	10,285.40
Newmarket Township	4,761.95	2,032.75	6,794.70
Matheson Township	9,425.41	702.72	10,128.13
Mount Joy Township	4,025.13	7,936.17	11,961.30
Deloro Township	56.22	....	56.22
Shaw Township	....	228.52	228.52
Teck Township	373.58	1,812.31	2,185.89
Playfair Township	8,201.26	....	8,201.26
Calvert Township	252.06	1,229.92	1,481.98
Mining Roads —			
Bidgood Mine Road	2,693.53	....	2,693.53
Omega Mine Road	958.49	....	958.49
Concordia Mine Road	11,067.73	....	11,067.73
DeSantis Mine Road	10,752.33	....	10,752.33
Melba Mine Road	10,784.47	....	10,784.47
Coulson Mine Road	3,588.10	....	3,588.10
Munro Road	25,277.07	....	25,277.07
Concordia-Clear Lake Road	5,846.15	....	5,846.15
Arcadia Mine Road	6,007.77	....	6,007.77
Delnite Mine Road	657.57	....	657.57
Shallow River Mines Road	2,472.45	....	2,472.45
Carscallen Township Road	4,338.18	....	4,338.18
Total	$1,120,538.12	$ 272,981.34	$1,393,519.46
NORTH COCHRANE: —			
Highway No. 11	$ 313,328.01	$ 80,671.04	$ 393,999.05
Preliminary Surveys	2,661.35	....	2,661.35
Secondary Roads —			
Norembega Road	484.10	6,811.43	7,295.53
Genier Road	1,006.54	1,338.33	2,344.87
Gardiner Road	....	2,142.33	2,142.33
Remi Lake Road	....	539.36	539.36
Casgrain Lake Road	574.94	2,089.91	2,664.85
Ryland Road	643.84	2,604.12	3,247.96
Coppell Road	1,994.48	5,912.22	7,906.70
Township Roads —			
Pyne Township	2,365.57	1,356.30	3,721.87
Fox Township	19,868.54	1,205.00	21,073.54
Kennedy Township	6,574.68	849.30	7,423.98
Brower Township	4,059.67	585.60	4,645.27
Glackmeyer Township	840.49	....	840.49
Blount Township	4,048.32	....	4,048.32
Lamarche Township	6,903.22	126.86	7,030.08
Fournier Township	9,389.06	1,050.92	10,439.98

District	Construction	Maintenance	Total
North Cechrane:- (Cont'd)			
Clute Township	9,750.39	1,586.64	11,337.03
Leitch Township	6,577.73	136.43	6,714.16
Calder Township	13,599.56	916.09	14,515.65
Kentrey Township	598.89	86.58	685.47
Haggart Township	9,027.90	2,357.76	11,385.66
Shackleton Township	11,955.61	2,590.37	14,545.98
Machin Township	13,407.96	2,114.39	15,522.35
Nansen Township	7,618.51	728.67	8,347.18
Fauquier Township	17,007.58	1,519.31	18,526.89
O'Brien Township	25,021.39	3,630.71	28,652.10
Owens Township	17,423.34	2,089.84	19,513.18
Williamson Township	15,111.93	738.40	15,850.33
Idington Township	12,660.56	831.96	13,492.52
McCrea Township	12,827.14	2,058.23	14,885.37
McGowan Township	2,379.84	182.74	2,562.58
Eilber Township	22,028.02	1,157.27	23,185.29
Devitt Township	13,894.34	1,723.12	15,617.46
Kendall Township	27,013.15	5,049.99	32,063.14
Casgrain Township	11,817.07	1,764.25	13,581.32
Lowther Township	10,339.25	1,351.59	11,690.84
Way Township	13,906.13	2,794.52	16,700.65
Hanlan Township	16,150.83	2,323.14	18,473.97
Total	$ 664,859.93	$ 145,014.72	$ 809,874.65
SUDBURY: —			
Highway No. 17	$ 323,108.77	$ 60,521.50	$ 383,630.27
Secondary Roads —			
Sudbury-Burwash	6,876.63	4,809.45	11,686.08
Sudbury-Long Lake	3,786.72	6,547.59	10,334.31
Sudbury-Benny	5,203.81	53,421.29	58,625.10
Chelmsford-Blezard	1,342.24	2,766.79	4,109.03
Sudbury-Milnet	28,241.03	10,967.16	39,208.19
Hanmer-Skead	125.03	2,086.21	2,211.24
Sudbury-Falconbridge	105,235.41	14,953.07	120,188.48
Hagar-Veuve	1,643.60	1,994.32	3,637.92
Markstay North and South	1,308.26	2,181.34	3,489.60
Wanapitae North and South	4,390.16	3,380.65	7,770.81
Coniston-Garson	911.08	1,726.11	2,637.19
Whitefish-Penage	1,835.48	2,566.07	4,401.55
Sault-Creighton	744.62	602.41	1,347.03
Copper Cliff-Creighton	426.85	7,632.19	8,059.04
Sudbury-Frood	....	256.68	256.68
Gogama-Three Duck Lake	9,729.99	....	9,729.99
Foleyet-Ivanhoe Lake	2,349.08	1,024.19	3,373.27
Westree-Houston Lake	19,398.03	1,092.86	20,490.89
Chapleau-Iron Bridge	1,528.54	1,328.72	2,857.26
Township Roads —			
Loughrin Township	2,642.72	625.72	3,268.44
Awrey Township	2,781.31	474.23	3,255.54
Dryden Township	3,822.61	299.14	4,121.75
Clelant Township	18,540.58	1,901.63	20,442.21
Broder Township	2,762.98	1,925.18	4,688.16
Dill Township	2,314.37	606 13	2,920.50
Trill Township	....	40.65	40.65
Snider Township	746.16	174.79	920.95
Creighton Township	100.39	19.09	119.48
Fairbanks Township	1,134.53	109.86	1,244.39
Ermatinger Township	421.68	....	421.68
Moncrieff Township	27,564.94	....	27,564.94
Morgan Township	258.93	515.73	774.66
Lumsden Township	882.33	....	882.33
Capreol Township	272.66	1,250.03	1,522.69
Norman Township	....	14.37	14.37
McLennan Township	....	101.83	101.83

District	Construction	Maintenance	Total
Sudbury:; (Cont'd)			
Township Roads —			
Falconbridge Township	749.26	381.40	1,130.66
Burwash Township	7,649.41	1,511.01	9,160.42
Hagar Township	1,652.50	327.95	1,980.45
Neelon Township	836.39	46.67	883.06
McKim Township	1,508.80	1.31	1,510.11
Waters Township	10,116.60	1,180.47	11,297.07
Denison Township	2,256.44	132.11	2,388.55
Drury Township	2,636.34	241.63	2,877.97
Rayside Township	1,251.40	587.59	1,838.99
Balfour Township	2,335.10	1,799.87	4,134.97
Dowling Township	436.46	966.76	1,403.22
Blezard Township	2,805.23	713.02	3,518.25
Hanmer Township	73.10	2,230.03	2,303.13
Total	$ 616,738.55	$ 198,036.80	$ 814,775.35
ALGOMA-MANITOULIN: —			
Highway No. 17	$ 683,571.84	$ 148,726.92	$ 832,298.76
" No. 68	126,694.87	56,431.27	183,126.14
Secondary Roads —			
Little Current-Gore Bay	2,920.11	20,276.54	23,196.65
Gore Bay-Mindemoya	7,554.62	12,369.97	19,924.59
West Bay Tehkummah	2,151.86	11,120.99	13,272.85
Gore Bay-Meldrum Bay	3,276.84	8,188.18	11,465.02
Shakespeare Road	1,018.72	1,298.84	2,317.56
Sauble River Road	4,389.14	3,552.92	7,942.06
Blind River-Lake Duborne	277.77	1,436.62	1,714.39
Matinenda Road	486.22	876.78	1,363.00
Iron Bridge-Hooverville	1,151.82	2,637.21	3,789.03
Thessalon-Hooverville	14,624.02	3,609.34	18,233.36
Hooverville North	18,664.03	10,185.78	28,849.81
White River Road	4,978.18	4,587.18	9,565.36
Sunn's Valley Road	5,860.18	13,091.92	18,952.10
St. Joseph Island Belt Line	19,361.73	20,075.49	39,437.22
Lake Penage Road	1,718.39	4,798.53	6,516.92
Township Roads —			
Louise Township	2,604.24	69.95	2,674.19
Lorne Township	5,240.45	1,103.39	6,343.84
Cockburn Island Township	1,051.20	....	1,051.20
Dawson Township	1,398.85	....	1,398.85
Robinson Township	1,679.60	....	1,679 60
Barrie Island Township	2,041.10	....	2,041.10
Burpee Township	3,233.67	....	3,233.67
Gordon Township	5,137.63	7.17	5,144.80
Miles Township	1,662.75	....	1,662.75
Allan Township	3,093.25	....	3,093.25
Campbell Township	4,425.01	93.90	4,518.91
Billings Township	3,107.67	....	3,107.67
Carnarvan Township	7,029.83	579.60	7,609.43
Howland Township	2,933.83	....	2,933.83
Bidwell Township	5,345.08	508.10	5,853.18
Sheguianda Township	569.01	67.80	636.81
Sandfield Township	2,328.31	....	2,328.31
Assiginack Township	3,543.13	2.40	3,545.53
Tehkummah Township	3,428.95	84.35	3,513.30
Rutherford and George Island Twp.	497.80	510.80	1,008.60
Mongowan Township	1,129.00	....	1,129.00
Merritt Township	4,722.90	546.05	5,268.95
Foster Township	1,575.70	67.00	1,642.70
Nairn Township	826.00	17.23	843.23
Baldwin Township	3,470.39	....	3,470.39
McKinnon Township	1,090.40	....	1,090.40
Hallam Township	5,325.90	110.90	5,436.80

District	Construction	Maintenance	Total
Algoma-Manitoulin:-(Cont'd)			
Township Roads —			
Harrow Township	628.50	....	628.50
May Township	2,200.15	9.38	2,209.53
Gough Township	465.45	....	465.45
Salter Township	2,744.49	27,099.38	29,843.87
Victoria Township	5,148.01	271.29	5,419.30
Shedden Township	4,594.80	461.90	5,056.70
Spragge Township	150.40	....	150.40
Striker Township	2,704.88	183.80	2,888.68
Cobden Township	11,676.60	130.10	11,806.70
Scarfe Township	....	36.00	36.00
Thompson Township	2,113.79	25,068.25	27,182.04
Patton Township	503.25	268.00	771.25
Bright Township	6,770.64	293.24	7,063.88
Gladstone Township	211.40	92.40	303.80
Parkinson Township	169.25	....	169.25
Grassett Township	159.80	....	159.80
Bright Adde Township	855.05	59.20	914.25
Day Township	36.66	....	36.66
Wells Township	1,184.10	41.20	1,225.30
Gould Township	788.70	....	788.70
Thessalon Township	2,473.53	95.60	2,569.13
Kirkwood Township	2,203.20	460.05	2,663.25
Lefroy Township	4,561.18	....	4,561.18
Rose Township	341.40	....	341.40
Galbraith Township	1,014.25	835.77	1,850.02
Plummer Adde Township	489.34	400.50	889.84
Plummer Township	3,326.14	229.23	3,555.37
Aberdeen Township	2,287.50	628.42	2,915.92
McMahon Township	....	862.10	862.10
Johnson Township	1,963.45	405.68	2,369.13
Aberdeen Adde Township	498.55	....	498.55
Meredith Township	323.02	....	323.02
Tarbutt Township	992.40	....	992.40
Laird Township	956.12	149.30	1,105.42
McDonald Township	974.80	545.45	1,520.25
Jocelyn Township	222.95	....	222.95
Hilton Township	618.50	509.66	1,128.16
St. Joseph Township	3,534.50	41.63	3,576.13
Total	$ 1,047,078.74	$ 386,210.65	$ 1,433,289.39
SAULT STE. MARIE:—			
Highway No. 17	$ 503,406.51	$ 59,243.71	$ 562,650.22
Secondary Roads —			
Second Line Road	11,079.69	10,267.17	21,346.86
Island Lake to Wabas	14,391.07	19,001.12	33,392.19
Peoples Road	970.25	5,267.06	6,237.31
Crystal Falls Road	21.15	2,512.23	2,533.38
Point Aux Pins Road	20.80	1,962.92	1,983.72
Goulais River-White Birches	2,468.91	1,206.21	3,675.12
Bellevere Valley Road	....	674.43	674.43
Township Roads —			
Hodgins Township	....	272.88	272.88
Gaudette Township	3,440.23	....	3,440.23
Vankoughnet Township	1,469.25	....	1,469.25
Korah Township	1,030.62	....	1,030.62
Fenwick Township	....	1,021.94	1,021.94
Kars Township	5,587.06	1,202.30	6,789.36
Fisher Township	....	3.00	3.00
Wicksteed Township	8,204.56	90.73	8,295.29
Townships No's 30 and 31	85.78	....	85.78
Mining Roads —			
Wawa-Minto Grace Mines	14,675.96	113.35	14,789.31
Michipicoten River to Michigan Hrbr.	2,168.43	....	2,168.43
Hawk Jct.-Murray Algoma Mine	4,732.93	....	4,732.93
Goudreau-Lockalsh Road	11,624.31	....	11,624.31
Helen Mine Road	21,442.33	....	21,442.33
Total	$ 606,819.84	$ 102,839.05	$ 709,658.89

District	Construction	Maintenance	Total
PORT ARTHUR:—			
Highway No. 17	$ 769,807.60	$ 30,757.92	$ 800,565.52
" No. 17A	125,408.09	5,607.31	131,015.40
Secondary Roads —			
Oliver Road	16,980.33	5,273.71	22,254.04
Dog Lake Road	4,241.61	5,397.90	9,639.51
Silver Island Road	4,608.10	7,280.75	11,888.85
Nipigon to Beardmore	32.13	2,239.55	2,271.68
Beardmore-Geraldton	186,996.08	1,072.03	188,068.11
Red Rock Road	29,460.13	34.02	29,494.15
Township Roads —			
Gorham Township	5,207.93	6,593.81	11,801.74
Ware Township	13,941.08	4,343.12	18,284.20
Jacques Township	4,002.82	1,104.42	5,107.24
Fowler Township	817.40	....	817.40
Sibley Township	1,887.89	606.09	2,493.98
Dorion Township	2,775.20	3,006.84	5,782.04
Stirling Township	1,133.76	788.23	1,921.99
Lyons Township	1,413.83	478.59	1,892.42
Nakina Township	9,356.83	366.29	9,723.12
Armstrong Township	2,502.46	479.58	2,982.04
Tookenay Road	199.05	298.60	497.65
Graham Area	1,582.51	.99	1,583.50
McIntyre Township	5,166.75	788.22	5,954.97
McGregor Township	1,141.08	520.06	1,661.14
McTavish Township	5,508.12	49.65	5,557.77
Nipigon Township	....	11.21	11.21
Mining Roads —			
Obonga Lake Road	44.35	....	44.35
Sturgeon River Area	10,641.87	....	10,641.87
Hutchison Lake Road	4,217.74	....	4,217.74
Geraldton-Bankfield Area	32,498.06	....	32,498.06
Savant Lake Area	5,296.11	....	5,296.11
Total	$1,246,868.91	$ 77,098.89	$1,323,967.80
FORT WILLIAM:—			
Highway No. 17	$ 240,554.49	$ 24,724.93	$ 265,279.42
" No. 61	4,588.16	43,164.59	47,752.75
Secondary Roads —			
Boundary of McIntyre-Oliver Twps.	16,980.33	5,273.71	22,254.04
Silver Mountain Road	14,696.32	10,272.84	24,969.16
Kakabeka to Nolalu	5,806.43	22,260.50	28,066.93
Hymers-Scoble Road	11,740.68	29,241.13	40,981.81
Pearson-Pardee Loop	3,315.64	4,452.70	7,768.34
Twin City Cross Road	2,322.53	1,151.55	3,474.08
Kashabowie Road	46,613.10	3,585.04	50,198.14
Devon Road	3.80	54.11	57.91
Township Roads —			
Marks Township	1,728.50	300.31	2,028.81
Lybster Township	3,007.08	1,798.34	4,805.42
Strange Township	2,405.28	348.66	2,753.94
Devon Township	5,756.91	1,156.76	6,913.67
Scoble Township	5,397.48	2,025.81	7,423.29
Pearson Township	8,975.39	2,286.46	11,261.85
Dawson Road Lots	4,880.17	3,514.83	8,395.00
Forbes Township	8,241.46	1,527.56	9,769.02
Goldie Township	2,592.24	10.86	2,603.10
Upsala Township	1,929.11	270.89	2,200.00
Laurie Township	98.40	....	98.40
Indian Reserve-Mount McKay-Squaw Bay	102.00	462.61	564.61
Oliver Township	2,001.86	310.29	2,312.15
Conmee Township	2,965.41	25.04	2,990.45
O'Connor Township	34,683.54	319.61	35,003.15
Gillies Township	8,034.04	276.89	8,310.93
Pardee Township	2,453.25	94.94	2,548.19

District	Construction	Maintenance	Total
Fort William:-(Cont'd)			
Township Roads —			
Blake Township	$ 7,949.01	$ 728.24	$ 8,677.25
Crooks Township	1,650.34	90.48	1,740.82
Paipoonage Township	5,340.04	186.77	5,526.81
Neebing Township	6,342.94	268.62	6,611.56
Mining Roads —			
Pickle Crow Road	61,418.28	....	61,418.28
Preliminary Survey	6,391.68	....	6,391.68
Total	$ 530,965.89	$ 160,185.07	$ 691,150.96
KENORA: —			
King's Highway No. 17	$ 1,092,855.73	$ 72,387.08	$ 1,165,242.81
" " No. 70	120,383.72	25,778.46	146,162.18
" " No. 72	134,972.50	20,325.33	155,297.83
Secondary Roads —			
Dyment Road	124.11	415.94	540.05
Hudson-Sioux Lookout Road	8,375.12	1,228.83	9,603.95
Rice Lake Loop Road	2,785.88	1,557.29	4,343.17
Richan Road	1,544.12	2,183.65	3,727.77
Aubrey-Eton Road	6,704.80	2,360.79	9,065.59
Pine Grove	1,946.30	1,134.36	3,080.66
Quibell Road	2,308.46	1,610.84	3,919.30
South Aubrey Road	2,300.92	1,909.91	4,210.83
East Melick and Coker Roads	48,092.78	2,925.08	51,017.86
Redditt Road	63,761.19	20,232.16	83,993.35
Pellatt Road	4,910.07	8,422.21	13,332.28
Rabbitt Lake Road	1,436.91	1,057.97	2,494.88
Township Roads —			
Melgund Township	5,307.59	1,723.89	7,031.48
Southworth Township	7,518.36	646.66	8,165.02
Hartman Township	.90	....	.90
Zealand Township	27,089.98	3,123.67	30,213.65
Van Horne Township	15,459.56	1,525.89	16,985.45
Wainwright Township	5,062.64	1,484.36	6,547.00
Britton Township	633.36	869.39	1,502.75
Rowell Township	2,982.75	1,315.47	4,298.22
Aubrey Township	1,571.65	1,403.07	2,974.72
Eton Township	11,006.67	2,965.52	13,972.19
Rugby Township	2,451.67	1,268.54	3,720.21
Sandford Township	8,707.66	2,039.17	10,746.83
Mafeking Township	30.00	....	30.00
Temple Township	1,089.10	1,499.47	2,588.57
Mutrie Township	4,687.38	1,679.19	6,366.57
Langton Township	2,838.86	999.79	3,838.65
Wabigoon Township	8,757.45	3,105.86	11,863.31
Redvers Township	13,642.40	783.18	14,425.58
Smellie Township	....	68.25	68.25
Haycock Township	1,146.28	1,150.33	2,296.61
Jaffray Township	836.07	731.68	1,567.75
Melick Township	9,973.20	582.49	10,555.69
Pellatt Township	24,420.33	4,688.66	29,108.99
Umbach Township	....	23.22	23.22
Drayton Township	104.23	....	104.23
Red Lake Area	121.68	....	121.68
Unsurveyed Territory	10,065.95	4,251.92	14,317.87
Mining Roads —			
Clarke Gold Mine Road	2,030.61	....	2,030.61
Wendigo Mine Road	16,897.11	....	16,897.11
Hudson Vermilion Lake Road	3,110.31	....	3,110.31
Red Lake-Madsen-Faulkenham and Ear Falls-Jackson Manion	88,143.58	....	88,143.58
Minnehah Lake to Gold Rock	4,738.27	....	4,738.27
Total	$ 1,772,928.21	$ 201,459.57	$ 1,974,387.78

District	Construction	Maintenance	Total
RAINY RIVER:—			
Highway No. 70	$ 58,425.36	$ 17,213.48	$ 75,638.84
" No. 70A	3,267.75	6,194.14	9,461.89
" No. 71	164,965.48	32,181.28	197,146.76
Secondary Roads —			
Border Mill Road	....	982.80	982.80
Frog Creek Road	1,975.82	1,752.68	3,728.50
Crozier Road	3,828.85	4,988.62	8,817.47
LaVallee Road	5,707.55	4,948.28	10,655.83
Devlin Road	16,383.29	5,674.66	22,057.95
Barnhart Road	11,671.57	1,819.67	13,491.24
Clearwater Lake Road	398.71	1,300.42	1,699.13
Stratton-Dewart Road	5,717.54	5,237.30	10,954.84
Arbor Vitae Road	8,501.08	5,640.85	14,141.93
Sleeman-Morson Road	8,492.35	7,446.28	15,938.63
Spohn Road	4,694.58	4,994.44	9,689.02
Spohn River Road	4,359.89	5,383.15	9,743.04
River Road	19,621.84	4,708.45	24,330.29
Dearlock Road	5,566.57	3,531.18	9,097.75
Tovell Road	6,895.41	2,735.38	9,630.79
Mine Centre Roads	298.10	940.32	1,238.42
Atikokan Roads	1,634.90	....	1,634.90
Township Roads —			
Devlin Township	....	95.40	95.40
Burriss Township	....	84.50	84.50
Dance Township	326.80	31.45	358.25
Aylsworth Township	....	50.90	50.90
Lash Township	....	130.80	130.80
Carpenter Township	....	123.10	123.10
Kingsford Township	2,002.44	356.39	2,358.83
Dobie Township	....	28.20	28.20
Mather Township	....	16.40	16.40
Potts Township	....	12.80	12.80
Shenston Township	1,571.07	100.00	1,671.07
Tait Township	....	12.00	12.00
Richardson Township	....	412.20	412.20
Morley Township	....	53.65	53.65
Pattullo Township	....	123.85	123.85
Sifton Township	723.01	123.80	846.81
Dewart Township	401.03	....	401.03
Dilke Township	....	28.80	28.80
Nelles Township	430.61	98.40	529.01
Sutherland Township	303.00	....	303.00
Worthington Township	....	94.97	94.97
Blue Township	....	190.80	190.80
Spohn Township	2,150.74	120.05	2,270.79
Miscampbell Township	459.72	....	459.72
Mining Roads —			
Project No. 36	2,162.26	....	2,162.26
Total	$ 342,937.32	$ 119,961.84	$ 462,899.16
TOWN OF BURLINGTON:—			
Highway No. 2	$ 211.49	$ 194.54	$ 406.03
TOWN OF OAKVILLE:—			
Highway No. 2	....	29.12	29.12
TOWN OF GRIMSBY:—			
Highway No. 8	....	26.52	26.52
TYENDINAGA INDIAN RESERVE:—			
Highway No. 2	21.63	2,686.56	2,708.19
STOCK	75,262.93	1,682.46	76,945.39
LANDS AND BUILDINGS	30,224.39	1,070.73	31,295.12
GRAND TOTAL	$33,828,481.96	$4,700,363.95	$38,528,845.91

APPENDIX No. 2
GROSS EXPENDITURE BY ROADS
April 1, 1937, to March 31, 1938

Highway No.	Location	Mileage	Construction	Maintenance	Total
2	Windsor-Quebec Boundary....	541.1	$1,743,271.53	$312,407.74	$2,055,679.27
2A	Windsor-Tilbury.............	34.5	1,663.06	4,797.82	6,460.88
2B	Highway No. 20 to Highway No. 25..................	2.43	283,791.62	1,248.78	285,040.40
3	Windsor-Fort Erie............	260	317,865.50	79,31449	397,179.99
3A	Chambers Corners-St. Catharines.................	25.5	97,205.25	4,409.48	101,614.73
3B	Windsor to Highway No. 3....	6.	40,819.81	1,240.20	42,060.01
4	Port Stanley-Flesherton.......	155.5	416,709.81	69,060.26	485,770.07
5	Toronto-Paris................	64.1	73,588.03	36,054.30	109,642.33
5B	Dundas to Junction of Highways 5 and 24............	16.5	....	348.99	348.99
6	Port Dover-Hamilton-Owen Sound-Tobermory..........	225.1	137,273.08	61,783.08	199,056.16
7	Sarnia-Ottawa...............	465.	893,638.45	230,286.49	1,123,924.94
8	Niagara Falls-Goderich.......	155.7	461,524.99	69,616.89	531,141.88
8A	St. Davids-Queenston.........	2.96	216.30	939.75	1,156.05
9	Schomberg-Kincardine........	112.8	127,789.77	31,019.37	158,809.14
10	Port Credit-Owen Sound......	105.	353,335.57	47,539.14	400,874.71
11	Toronto-North Bay-Hearst....	636.3	4,125,750.35	439,785.53	4,565,535.88
12	Whitby-Midland.............	97.6	557,290.68	51,096.10	608,386.78
14	Picton-Marmora.............	51.4	221,410.72	29,481.99	250,892.71
15	Ottawa-Kingston.............	131.	34,042.78	62,222.79	96,265.57
16	Ottawa-Prescott..............	62.3	68,983.20	18,428.90	87,412.10
17	Point Fortune-Mamainse-Nipigon-Manitoba Boundary.	1058.4	4,644,453.51	562,620.17	5,207,073.68
17A	Port Arthur to Highway 17....	23.2	125,408.09	5,607.31	131,015.40
18	Leamington-Windsor..........	49	19,915.67	6,510.23	26,425.90
18A	Kingsville-Highway 18........	18	434.01	....	434.01
19	Port Burwell-Tralee..........	92.2	554,136.84	30,832.45	584,969.29
20	Niagara Falls-Burlington......	53.3	203,731.09	29,776.05	233,507.14
20A	Hamilton S. to Highway No. 20	3.16	1,763.65	695.07	2,458.72
21	Morpeth-Owen Sound.........	211.8	1,063,815.81	83,758.61	1,147,574.42
21A	Highway No. 7-Port Franks...	19.1	320,703.39	8,881.64	329,585.03
22	London-Sarnia...............	66.8	40,188.28	12,584.90	52,773.18
23	London-Arthur...............	86.3	73,458.73	22,703.95	96,162.68
24	Port Dover-Collingwood.......	143.4	38,790.31	64,024.80	102,815.11
24A	Paris-Galt..................	13.1	205.76	3,664.84	3,870.60
25	Burlington-Milton............	14.37	781,755.95	15,475.46	797,231.41
26	Barrie-Owen Sound...........	74.6	30,943.53	33,711.15	64,654.68
27	Schomberg-Penetanguishene...	62.1	616,023.89	35,482.99	651,506.88
28	Port Hope-Apsley............	67.9	119,754.95	36,536.74	156,291.69
29	Brockville-Arnprior...........	76.4	126,554.94	35,447.84	162,002.78
30	Brighton-Havelock...........	32.	189,787.41	20,584.36	210,371.77
31	Morrisburg-Ottawa...........	48.4	82,284.17	26,840.33	109,124.50
32	Gananoque-Smith's Falls......	47.9	7,716.37	7,735.79	15,452.16
33	Kingston-Stirling.............	86.2	455,411.18	25,820.02	481,231.20
34	Lancaster-Hawkesbury........	38.1	402,265.34	15,895.81	418,161.15
35	Lindsay-Huntsville...........	110.2	80,902.92	57,283.75	138,186.67
36	Lindsay-Burleigh Falls........	47.5	255,811.08	8,994.96	264,806.04
37	Belleville-Actinolite...........	29.3	67,962.78	15,705.50	83,669.28
38	Kingston-Highway No. 7......	47.1	262,939.52	14,277.95	277,217.47
39	Windsor-Belle River..........	27.2	6,652.51	5,284.54	11,937.05
40	Sarnia-Chatham.............	50.1	647,082.94	20,063.88	667,146.82
41	Napanee-Golden Lake........	118.6	227,370.53	38,964.67	266,335.20
42	Brockville-Westport..........	43.	23,452.13	10,369.06	33,821.19
45	Cobourg-Norwood............	33.2	11,164.38	4,152.05	15,316.43
46	Highway No. 7-Coboconk.....	34.	20,908.20	5,780.34	26,688.54
47	Highway No. 12-Stouffville....	19.	11,382.48	102.19	11,484.67
48	Port Bolster-Beaverton........	6.	4,317.06	2,557.70	6,874.76
49	Kleinburg to Highway No. 50..	3.5	1,966.31	956.50	2,922.81

APPENDIX No. 2

GROSS EXPENDITURE BY ROADS

April 1, 1937, to March 31, 1938

Highway No.	Location	Mileage	Construction	Maintenance	Total
50	Highway No. 7 to Highway No. 9 via Bolton	18.	76,150.50	1,234.14	77,384.64
53	Eastwood-Highway No. 20	48.9	275,422.86	9,507.07	284,929.93
59	Woodstock-Delhi	26.5	3,736.92	15,607.32	19,344.24
60	Huntsville-Lake Dore	135.6	260,817.85	44,773.90	305,591.75
61	Fort William to U. S. Boundary	43	4,588.16	43,164.59	47,752.75
62	Madoc-Pembroke	135	539,705.34	22,265.86	561,971.20
63	North Bay-Temiskaming	41	63,434.37	16,962.61	80,396.98
64	Sturgeon Falls-Martin River	34.6	30,194.98	21,041.52	51,236.50
65	New Liskeard-Matachewan	66.7	31,098.54	77,284.58	108,383.12
66	Swastika-Quebec Boundary	33.7	44,112.13	45,688.75	89,800.88
67	Iroquois Falls-Timmins	43.6	430,862.26	33,783.03	464,645.29
68	Espanola-Little Current	35	126,694.87	56,431.27	183,126.14
69	Atherly-Washago-Gravenhurst-Point-au-Baril	93.4	1,000,463.37	33,300.79	1,033,764.16
70	Kenora-Fort Frances	143.	178,809.08	42,991.94	221,801.02
70A	Barwick to Jct. of Highway 70	14	3,267.75	6,194.14	9,461.89
71	Fort Francis-Rainy River	60.	164,965.48	32,181.28	197,146.76
72	Dinorwic-Sioux Lookout-Hudson	101	134,972.50	20,325.33	155,297.83
73	Port Bruce-Dorchester Rd.	23	69,912.50	3,174.15	73,086.65
74	New Sarun-Nilestown	14	92,336.18	3,934.24	96,270.42
75	Wallacetown-Dutton	2.5	168,458.77	394.47	168,853.24
76	Eagle-West Lorne	3.5	167,511.79	299.49	167,811.28
77	New Glasgow-Rodney	4	46,857.16	406.43	47,263.59
78	Wallaceburg-Dresden	10.5	5.05	....	5.05
79	Highway No. 2-Watford via Bothwell	25.5	23,358.27	702.09	24,060.36
80	Alvinston-Highway No. 2 via Glencoe	13	417.22	7,472.17	7,889.39
81	Delaware-Grand Bend	44.	141,045.18	20,632.42	161,677.60
83	Highway No. 21-Highway No. 23 via Dashwood	24.	15.00	234.24	249.2
84	St. Joseph-Hensall	10.5	5.00	....	5.00
85	Kitchener-Elmira	12	72,597.39	3,407.10	76,004.49
86	Amberley-Highway No. 7	79.	14,872.37	8,617.83	23,490.20
87	Bluevale-Harriston	19.5	3,304.63	1,808.18	5,112.81
90	Angus-Allandale	11.	....	33.60	33.60
92	Elmvale-Wasaga Beach	9.	23,292.55	5,860.20	29,152.75
95	Wolfe Island North and South Road	7.	2,491.45	4,723.52	7,214.97
96	Wolfe Island West and East Road	20.	5,643.08	17,042.30	22,685.38
	Sarnia-Grand Bend, Lake Shore Road	33.7	549.95	....	549.95
	Sarnia-Point Edward International Bridge	....	437,901.88	....	437,901.88
	Pelee Island Road	6.	12,740.65	421.89	13,162.54
	Parent Blvd. Windsor Entrance	....	16.51	....	16.51
	Ruthven to Highway 18	1.	6.03	....	6.03
	Michigan Central Side Road Windsor	1.	121.20	....	121.20
	Primrose-Cookstown	21.74	80,510.37	16,316.91	96,827.28
	Queen Street	16.86	1,130,070.69	16,766.80	1,146,837.49
	St. Lawrence River Road	26.65	524,535.16	402.20	524,937.36
	Howe Island Road	6	....	2,305.80	2,305.80
	Amherst Island Road	8	6,761.55	....	6,761.55
	Niagara Falls New Road	36.31	1,196,175.41	282.87	1,196,458.28
	Canal Road-Humberstone-Welland	6.48	247.36	15,54.64	1,802.00

APPENDIX No. 2
GROSS EXPENDITURE BY ROADS
April 1, 1937, to March 31, 1938

Highway No.	Location	Mileage	Construction	Maintenance	Total
	Dominion Road-Ridgeway-Fort Erie	6.77	811.78	2,769.74	3,581.52
	Hamilton-Dundas	2.2	263,819.36	645.40	264,464.76
	Grand River Road	27.	17,539.20	10,948.51	28,487.71
	Darkie Side Road	7.25	5,863.94	1,442.49	7,306.43
	Peters Corners to Highway No. 2	6.6	....	402.81	402.81
	Total King's Highways		29,356,677.80	3,476,507.30	32,833,185.10
	Total Secondary Roads, see schedule No. 1 for details		2,201,095.92	937,231.36	3,138,327.28
	Total Township Road Expenditure, see schedule No. 1 for details		1,265,998.72	283,758.75	1,549,757.47
	Total Mining Roads Expenditure, see schedule No. 1 for details		388,907.09	113.35	389,020.44
	Total Lands and Buildings		30,224.39	1,070.73	31,295.12
	Total Preliminary Surveys, see schedule No. 1 for details		28,847.61	....	28,847.61
	Total Stock		75,262.93	1,682.46	76,945.39
	Fort Henry		481,467.50	....	481,467.50
			$33,828,481.96	$4,700,363.95	$38,528,845.91

APPENDIX No. 3

SCHEDULE OF ASSUMPTIONS AND REVERSIONS OF SECTIONS OF THE KING'S HIGHWAY SYSTEM FOR THE FISCAL YEAR ENDING MARCH 31st, 1938

During the year the system was extended by assuming 2,963.01 miles, less 16.37 miles reverted, making a total assumed of 6,755.56 miles. A list of the roads added to the system, together with the mileage and date of designation, also a list of roads and mileages reverted from the system is as follows:

The King's Highways Assumed Between March 31, 1937, and March 31, 1938

Location of Road	District	Assumed Date	Miles
Trans-Canada	Algoma	June 30	189.25
Ferguson Highway	Cochrane	June 2	210.74
Timmins-Iroquois Falls	Cochrane	June 30	42.00
Minden Road	Haliburton	Oct. 6	50.64
Trans-Canada	Kenora	July 14	219.83
Dinorwic-Sioux Lookout	Kenora	Oct. 6	52.46
Heenan Highway	Kenora	Sept. 1	65.60
Espanola-Little Current	Manitoulin	Aug. 11	16.85
Ferguson Highway	Muskoka	June 9	50.01
Gravenhurst-Point-au-Baril	Muskoka	Aug. 25	31.01
Huntsville East	Muskoka	Oct. 6	30.24
Ferguson Highway	Nipissing	June 30	85.05
Trans-Canada	Nipissing	Sept. 22	54.05
Trans-Canada	Nipissing	June 30	40.90
Algonquin Park Road	Nipissing	Sept. 22	58.80
Sturgeon Falls N.	Nipissing	Aug. 25	33.29
North Bay-Temiskaming	Nipissing	Aug. 25	40.31
Ferguson Hy. and Callander-Diomnes	Parry Sound	June 16	60.10
Gravenhurst-Point-au-Baril	Parry Sound	Aug. 11	46.75
Fort Francis-Rainy River	Rainy River	Sept. 1	56.70
Heenan Highway	Rainy River	Sept. 29	52.25
Trans-Canada	Sudbury	June 30	100.00
Little Current Road	Sudbury	Aug. 11	19.85
Sudbury-Burwash	Sudbury	Aug. 11	19.50
Trans-Canada	Thunder Bay	June 30	256.90
International Hy. (Ft. William to U. S. Bdry.)	Thunder Bay	Oct. 6	39.90
Ferguson Highway	Temiskaming	June 30	113.16
New Liskeard to Matachewan Road	Temiskaming	Aug. 7	67.60
Swastika-Quebec	Temiskaming	Sept. 22	26.20
Cainsville to Cayuga Road	Brant	Oct. 6	13.0
Highway No. 21 to Tobermory	Bruce	Aug. 25	58.0
Kitchener to Amberley Rd.	Bruce	Aug. 25	9.6
Highway No. 9 to Grand Valley	Dufferin	Sept. 1	1.6
Shelburne to Collingwood Rd.	Dufferin	Aug. 11	11.75
Ruthven to Highway No. 3	Essex	Aug. 25	1.6
Michigan Central Side Road	Essex	Aug. 25	0.8
New Sarum N.	Elgin	Aug. 25	7.5
Port Bruce N.	Elgin	Aug. 25	15.7
Kaladar to Lake Dore Road	Frontenac	Sept. 29	7.89
Shelburne to Collingwood Road	Grey	Nov. 3	4.5
Highway No. 21 to Tobermory	Grey	Nov. 3	6.7
Cainsville to Cayuga Road	Haldimand	Mar. 31	10.9
Cainsville to Cayuga Road	Haldimand	Oct. 6	3.0
Milton to Acton	Halton	Aug. 25	10.5
Madoc to Combermere Road	Hastings	Aug. 11	83.0
Grand Bend to Delaware Road	Huron	Sept. 1	5.0
Harriston to Bluevale Road	Huron	Aug. 25	15.0
Kitchener to Amberley Road	Huron	Aug. 25	27.9
Watford to Bothwell Road	Kent	Aug. 11	3.75
Watford to Bothwell Road	Lambton	Aug. 11	25.00
Kaladar to Lake Dore Road	Lennox and Addington	Oct. 6	39.93
St. Catharines to Thorold	Lincoln	Oct. 6	2.5
Alvinson to Highway No. 2	Middlesex	Aug. 11	11.75
Grand Bend to Delaware Road	Middlesex	Sept. 1	21.8
Port Bruce to Dorchester Road	Middlesex	Aug. 25	4.5

ASSUMPTIONS AND REVERSIONS OF SECTIONS—Continued

Location of Road	District	Assumed Date	Miles
New Sarum to Dorchester Road	Middlesex	Sept. 1	5.4
Delhi to Woodstock Road	Middlesex	Aug. 25	2.0
Cobourg to Norwood Road	Northumberland	Sept. 1	25.1
Port Bolster Road	Ontario	Mar. 24	6.0
Stouffville to Greenbank Road	Ontario	Oct. 20	14.8
Woodstock to Delhi Road	Oxford	Aug. 25	23.5
Town of Tillsonburg	Oxford	Nov. 11	0.25
Highway No. 7 to Highway No. 9	Peel	Aug. 11	8.75
Highway No. 7 to Highway No. 9	Peel	Oct. 6	2.5
Kitchener to Amberley	Perth	Aug. 25	13.0
Peterboro to Apsley	Peterboro	Aug. 11	16.0
Burleigh Falls to Bobcaygeon	Peterboro	Aug. 11	22.5
Cobourg to Norwood Road	Peterboro	Sept. 1	5.0
Madoc to Pembroke Road	Renfrew	Aug. 11	51.0
Kaladar to Golden Lake Road	Renfrew	Oct. 20	38.0
Huntsville to Lake Dore Road	Renfrew	Sept. 29	48.4
Collingwood and Stayner to Shelburne Rd.	Simcoe	Aug. 11	19.25
Barrie to Angus	Simcoe	Oct. 6	10.00
Rosedale to Highway No. 60	Victoria	Sept. 1	14.5
Coboconk to Highway No. 7	Victoria	Aug. 11	34.0
Kitchener to Amberley Road	Waterloo	Aug. 25	6.6
Guelph to Erin	Wellington	Mar. 31	20.8
Harriston to Bluevale Road	Wellington	Aug. 25	5.1
Kitchener to Amberley	Wellington	Aug. 25	8.2
St. Catharines to Thorold	Welland	Oct. 6	1.4
Rockton N.	Wentworth	Sept. 1	8.25
Scarboro to Leaside (Eglinton Ave.)	York	Sept. 22	8.8
Kingston Road	York	May 26	4.3
Highway No. 7 to Highway No. 9	York	Oct. 6	2.5
Port Bolster Road	York	Sept. 1	0.5
Stouffville to Greenbank Road	York	Oct. 6	3.5
		Miles	2,963.01

Reversions in the Fiscal Year Ending March 31st, 1938

County	Date of Reversion	Miles
Dundas	June 26th, 1937	2.20
Frontenac	April 27th, 1937	0.69
Glengarry	August 14th, 1937	2.82
Grey	April 27th, 1937	0.41
Hastings	May 6th, 1937	0.06
Hastings	August 14th, 1937	0.11
Lanark	April 27th	2.25
Lincoln	April 27th	0.68
Northumberland	December 28th, 1937	0.64
Peterborough	August 14th, 1937	0.04
Peterborough	December 18th, 1937	0.28
Peterborough	December 27th, 1937	0.23
Prince Edward	April 27th, 1937	1.67
Victoria	December 10th, 1937	3.10
Waterloo	April 15th, 1937	0.30
Waterloo	April 20th, 1937	0.07
Welland	August 14th, 1937	0.55
Welland	August 27th, 1937	0.27
	Miles	16.37

APPENDIX No. 4

GROWTH OF COUNTY ROAD EXPENDITURES AND PROVINCIAL GRANTS

Year work was done	Number of Counties	Expenditure	Government Grants
1903	4	$ 166,149.06	$ 55,383.02
1904	7	291,085.42	97,028.48
1905	6	179,593.62	59,864.53
1906	8	247,102.37	82,367.45
1907	14	383,518.86	127,839.62
1908	15	429,393.57	143,131.16
1909	16	440,374.08	146,791.36
1910	17	553,312.61	184,437.54
1911	19	712,072.52	237,357.50
1912	20	898,631.18	299,543.69
1913	20	847,684.15	282,561.35
1914	20	785,521.93	261,840.61
1915	20	811,540.05	270,513.34
1916	21	955,447.19	327,663.76
1917	30	1,388,341.87	483,621.32
1918	36	2,226,899.70	815,440.01
1919	37	5,714,937.19	2,623,719.24
1920	..	7,956,863.72	3,626,418.08
1921	..	11,078,288.39	5,119,882.26
1922	..	9,162,491.79	4,258,339.83
1923	..	7,403,509.96	3,418,523.07
1924	..	6,861,451.62	3,214,321.50
1925	..	6,608,431.04	3,222,678.10
1926	..	5,838,445.12	2,913,660.96
1927	..	7,424,464.85	3,706,719.88
1928	..	8,784,420.42	4,360,222.86
1929	..	9,212,758.04	4,591,110.16
1930	..	8,929,424.27	4,463,527.11
1931	..	7,265,350.65	3,625,860.66
1932	..	4,214,410.70	2,106,457.18
1933	..	3,058,622.91	1,529,228.37
1934	..	3,391,768.96	1,695,291.35
1935	..	3,107,215.32	1,553,273.39
1936	..	3,438,188.53	1,718,944.63
1937	..	4,062,753.39	2,031,372.49
Totals to date		$ 134,830,465.05	$ $63,654,935.86

BRIDGES COMPLETED ON THE
APPENDIX

Name	Type	Span	Highway
Arva Creek	Concrete Rigid Frame	1 at 35′ 0″	23
Atikokan Br.	Timber Trestle	2 at 15′ 0″	Atikokan-Steep Rock L.
	Timber Truss	1 at 40′ 0″	
Balsam Creek	Timber Trestle	6 at 15′ 0″	63
Bar River	Concrete Rigid Frame	1 at 40′ 0″	17
Beaver Dam Creek	Creosoted Timber Bents	3 at 15′ 0″	Stanley-Round L.
Becketts Landing Br.	Low Steel Truss	5 at 90′ 0″	16
Big Jocko River	Timber Beam	2 at 20′	63
Black Bridge	Timber Beam	4 at 15′	Township Road
Black Sturgeon River	Creosoted Timber Truss	1 at 105′	17
	Creosoted Timber Beam	4 at 15′, 2 at 29′	
Brazeau's Bridge	Timber Truss	1 at 50′	
	Timber Beam	2 at 15′	
Brewery Bridge	Twin Concrete Arch	2 at 75′	4
Canard Bridge	Steel on Pile Footings	3 at 50′	18
		2 at 49′ 7″	
Claire River	Steel Girder	1 at 41′ 0″	41
Coldwater Creek	Creosoted Timber Beam	3 at 29′—2 at 15′	17
Crammer Creek	Timber Beam	3 at 15′	East Melick-Reddit
Dredge Cut No. 2	Concrete Beam and Slab	4 at 49′ 6″	2
Deline's Br.	Timber Truss	1 at 30′	
Emily Creek	Concrete Beam and Girder	1 at 37′ 2″	36
		2 at 18′ 10″	
Erickson Br.	Timber Beam	4 at 15′ 0″	Township Road
Fernley's Br.	Timber Beam	4 at 15′ 0″	
Fish Creek No. 3	Concrete Rigid Frame	1 at 45′ 0″	23
Fish Creek No. 4	Concrete Rigid Frame	1 at 45′ 0″	23
Flat Creek	Concrete Rigid Frame	1 at 60′ 0″	23
Harrington Creek	Creosoted Timber Beam	3 at 15′ 0″	Mattawa-Temiskaming
Harrison Twp. Overhead	Concrete Rigid Frame (Triple Span)	1 at 23′ 5″	69
		2 at 22′ 5″	
Hilliard Twp.	Timber Trestle	6 at 15′	
Hills Lake	Timber Truss	1 at 45′	
	Timber Trestle	2 at 15′	
Humber River (W. Br.)	Cantilever Arch	1 at 120′ 1″	27
Hurontario Cloverleaf	Concrete Rigid Frame	2 at 32′ 9¾″	Middle Rd. and No. 10
Indian River No. 3	Concrete Rigid Frame	1 at 30′	62
Indian River No. 4	Concrete Rigid Frame	1 at 30′	62
Irwin Twp. No. 1	Creosoted Beam Span	1 at 30′	Beardmore-Geraldton
Irwin Twp. No. 2	Creosoted Beam Span	3 at 20′	Beardmore-Geraldton
Jeanette Creek	Concrete Rigid Frame	1 at 45′	2
Judson Br.	Pile Trestle	3 at 15′	Township Road
Kenogami L.	Steel Beam	3 at 50′	11
Little Jocko River	Pile Trestle	7 at 15′	63
Laronde Creek	Concrete Rigid Frame	1 at 45′	17
Lauzon Creek	Concrete Arch	1 at 40′	17
Mackenzie River (N. Br.)	Timber Truss on Cribs	1 at 30′	Trans-Canada to MacGregor Twp.
Mathews Br.	Pile Trestle	9 at 15′	Blind River-Patton
Mattawishquia	Concrete Beam and Slab	2 at 90′	11
		2 at 28′	
McGillivray Creek Extn.	Concrete Beam and Slab	1 at 25′	11
McGillivray Creek Extn.	Concrete Beam and Slab	1 at 25′	11
Meadowside Br.	Steel Deck Truss and Steel Beam Approaches	1 at 90′	17
		2 at 30′	
Meyersburg	Concrete Arch	1 at 60′	30
Morrisburg Subway	Rigid Frame	1 at 42′	31
New Sarum	Concrete Rigid Arch	1 at 70′	3
		2 at 23′	

KING'S HIGHWAY DURING 1937

No. 5

Township	Lot	Con.	County or District	Division
Biddulph	3	IX	Middlesex	3
Unsurveyed			Rainy River	21
Phelps	12	IV	Nipissing	13
Laird	Sects. E and 7		Algoma	18
Lybster	8	IV and V	Thunder Bay	19
Oxford-Marlborough	26, 4	I., B. F.	Carleton	9
Jocko			Nipissing	13
Dobie	10 and 11	V	Rainy River	21
Lyons	2	VII	Thunder Bay	19
Kerns	8 and 9	V	Timiskaming	14
Southwold	1	VII	Elgin	2
Anderdon	32	I	Essex	1
Sheffield	18	III	Lennox and Addington	8
Dorion	10	III	Thunder Bay	19
Melick	8	VI	Kenora	20
Raleigh	8	IV	Kent	1
Hilliard	9	IV and V	Timiskaming	14
Verulam	5 and 6	IV	Victoria	7
McCrosson	8 and 9	III	Rainy River	21
Evanturel Armstrong	3	Boundary	Timiskaming	14
Blanshard	8	IV	Perth	3
Blanshard	10	W. Bdry	Perth	3
Fullarton	24	XII	Perth	3
Mattawan	12	VIII	Nipissing	13
Harrison	27	VII	Parry Sound	12
Hilliard	5	IV and V	Timiskaming	14
Robillard	2 and 3	I	Timiskaming	14
Etobicoke	33	III	York	6
Toronto	1	II and III	Peel	6
Fraser	8	VIII	Renfrew	10
Fraser	6	VIII	Renfrew	10
Irwin Twp			Thunder Bay	19
Irwin Twp			Thunder Bay	19
Raleigh	6	IV	Kent	1
Carpenter	4 and 5	V	Rainy River	21
Grenfell			Timiskaming	15
Jocko			Nipissing	13
Beaucage	8	1	Nipissing	13
Lewis	12	1	Algoma	18
MacGregor	8	A	Thunder Bay	19
Cobden	4	IV	Algoma	18
Kendall	22	X	Cochrane	16
S. Himsworth	15 and 16	VIII	Parry Sound	12
S. Himsworth	16	VII	Parry Sound	12
Beaucage	11 and 12	I	Nipissing	13
Seymour	4	II	Northumberland	7
Edwardsburg	Morrisburg Vlge.		Grenville	9
Yarmouth	22	8	Elgin	2

BRIDGES COMPLETED ON THE

APPENDIX

Name	Type	Span	Highway
Nipigon River	Steel Deck Truss	1 at 31′ 3″	17
		5 at 93′ 4″	
		1 at 220′ 0″	
North River No. 1	Pile Trestle	3 at 15′ 0″	63
North River No. 2	Pile Trestle	2 at 15′ 0″	North Bay-Widdifield
Oliver Cr.	Timber Truss on Cribs	1 at 30′	Twin City Cross Rd -Silver Mt. Road
Olsen Br.	Pile Trestle	3 at 15′	Township Road
Orland Br.	Concrete Rigid Frame	1 at 60′	30
Otter Cr. No. 5	Concrete Beam and Slab	1 at 70′	19
		2 at 40′	
Otto Twp. Overhead	Concrete and Steel Grdrs.	1 at 50′	11
Pelican River	Timber Trestle	13 at 15′	Eton Rugby West
Pine River	Steel Truss on Piling	1 at 42′	Township Road
Portlock River	Concrete Rigid Frame	1 at 40′	17
Queen's Bridge	Concrete Twin Arch	2 at 80′	4
Richview Bridge	Concrete Arch	1 at 45′	27
Serpent River	Concrete Rigid Frame	1 at 60′	17
Shallow Lake	Timber Trestle	5 at 15′	Quibell East
Shawana Creek	Steel Beam Conc. Slab	1 at 35′ 6″	21A
Shewfelt Creek	Concrete Rigid Frame	1 at 24′	17
Slate River	Timber Truss on Creosoted Piles	1 at 40′ 2 at 14′	International Highway W
Stark's Bridge	Timber Truss	1 at 39′	
	Timber Trestle	3 at 15′	
Steel Bridge	Pile Trestle	4 at 15′	Township Road
Stillwater Creek	Creosoted Timber Trestle	1 at 29′	17
		2 at 15′	
Strawberry Creek No. 1	Creosoted Timber Trestle	1 at 29′	17A
		4 at 15′	
Strawberry Creek No. 2	Creosoted Timber Trestle	2 at 29′	17A
		4 at 15′	
Strawberry Creek No. 3	Creosoted Timber Trestle	1 at 29′	17A
		4 at 15′	
Sturgeon River	Concrete Rigid Frame	1 at 30′	12
Sunday Creek No. 2	Timber Trestle	2 at 15′	
		1 at 18′	
Swanson's Bridge	Timber Truss	1 at 60′	
	Timber Trestle	3 at 15′	
Thamesville Br.	Steel Truss	2 at 80′	21
	Cantilever Type	1 at 160′	
Tice's Bridge	Timber Truss	1 at 30′	
	Timber Trestle	2 at 15′	
Tillsonburg	Concrete Rigid Arch	1 at 70′	3
		2 at 20′ 6″	
Trout Creek Extension	Concrete Beam and Slab	1 at 40′ 0″	11
Veuve River	Steel Beams on Timber Bents	1 at 40′ 2 at 24′	17
Vincent Twp. No. 1	Creosoted Timber Trestle	3 at 20′	Beardmore-Geraldton
Vincent Twp. No. 2	Creosoted Timber Trestle	1 at 20′	Beardmore-Geraldton
		2 at 15′	
Walkerton	Concrete Rigid Frame	3 at 61′	4
	Beam Type	2 at 18′	
Wallaceburg, S.	Concrete Beam and Slab	1 at 36′ 6″	40
Wellandport No. 1	Concrete Arch and Steel Span	2 at 25′ 1 at 96′	20A
Wolf River	Creosoted Truss	1 at 90′	17
	Creosoted Trestle	4 at 15′	
Woodstock	Concrete Rigid Frame	1 at 70′	19
		2 at 20′ 6″	

KING'S HIGHWAY DURING 1937 (CONTINUED)

No. 5

Township	Lot	Con.	County or District	Division
Nipigon	14	I and II	Thunder Bay	19
Widdifield	4	I	Nipissing	13
Widdifield	4	II	Nipissing	13
Paipoonge	26	A	Thunder Bay	19
Wildlands	Sects 17 and 25		Rainy River	21
Brighton	2	VII	Northumberland	7
Bayham	15	III	Elgin	2
Otto	4		Timiskaming	15
Eton and Rugby	7	Twp. Line	Kenora	20
Pearson	16 17	II	Thunder Bay	19
Johnson	"L"		Algoma	18
Southwold	1	VII	Elgin	2
Etobicoke	19	II and III	York	6
Lewis	8	II	Algoma	18
Wabigoon	6	IV	Kenora	20
Bosanquet	20	XIII and XIV	Lambton	1
Tarbutt Additional	8	V and VI	Algoma	18
Paipoonge	14	6 — S.R.	Thunder Bay	19
Savard	3	II and III	Timiskaming	14
Dance Twp.	11	II and III	Rainy River	21
Nipigon	12	IV	Thunder Bay	19
Ware	13	A	Thunder Bay	19
Ware	16	A	Thunder Bay	19
Ware	18	A	Thunder Bay	19
Tay	8	VIII	Simcoe	6
Bryce	3	V and VI	Timiskaming	14
Marquis			Timiskaming	14
Howard	15	I	Kent	1
Ingram	10 and 11	I	Timiskaming	14
Dereham	3	XII	Oxford	2
S. Himsworth	25	II	Parry Sound	12
Dunnet	9	VI	Sudbury	13
Vincent			Thunder Bay	19
Vincent			Thunder Bay	19
Brant	Town Walkerton		Bruce	5
Chatham	1	XVIII	Kent	1
Gainsboro	15	I	Lincoln	4
Wainfleet	40	VII	Welland	
Dorion	12	II	Thunder Bay	19
Zorra E.	3	XII	Oxford	3

APPENDIX No. 6

COUNTY ROAD MILEAGE AND EXPENDITURE

From Inception of County Road Systems to December 31st, 1938 — Provincial Subsidies on 1937 Expenditure Being Paid in 1938

County	Year of Establishment of System	Road Mileages			Total Approved Expenditure to end of 1937	Total Government Grant
		County Roads	County Suburban Roads	Total		
		Miles	Miles	Miles		
Brant	1917	58.5	20.2	78.7	$ 2,471,681.02	$1,227,606.36
Bruce	1917	228.7	....	228.7	3,425,580.11	1,702,769.31
Carleton	1910	153.2	89.6	242.8	6,951,382.98	3,268,613.79
Dufferin	1918	139.6	....	139.6	1,429,030.85	677,548.34
Elgin	1917	194.4	18.3	212.7	2,582,524.52	1,215,547.88
Essex	1916	213.6	37.5	251.1	6,213,468.30	3,051,122.41
Frontenac	1907	131.4	28.5	159.9	1,640,500.90	754,241.44
Grey	1918	181.8	32.4	214.2	3,462,235.39	1,708,240.84
Haldimand	1912	146.1	....	146.1	2,671,827.10	1,234,573.15
Halton	1907	134.6	....	134.6	2,353,212.85	1,080,661.02
Hastings	1904	281.0	....	281.0	3,491,187.85	1,618,453.37
Huron	1917	380.1	....	380.1	2,936,206.55	1,404,838.02
Kent	1917	282.1	9.5	291.6	4,699,625.63	2,346,144.55
Lambton	1918	243.1	12.0	255.1	2,703,976.60	1,302,990.71
Lanark	1903	220.0	....	220.0	2,841,479.83	1,342,826.17
Leeds and Grenville	1910	234.4	11.4	245.8	3,771,380.45	1,738,982.90
Lennox and Addington	1906	133.0	....	133.0	2,684,428.50	1,296,889.95
Lincoln	1904	122.9	12.3	135.2	4,241,940.26	1,857,783.29
Middlesex	1906	355.8	41.0	396.8	4,389,191.06	2,010,285.35
Norfolk	1917	202.0	....	202.0	3,473,678.45	1,651,166.03
Northumberland and Durham	1918	231.6	....	231.6	3,199,701.76	1,571,565.16
Ontario	1918	170.9	13.5	184.4	2,157,541.34	1,045,136.63
Oxford	1904–7	194.1	4.0	198.1	3,036,122.78	1,345,363.12
Peel	1907	125.3	....	125.3	2,637,821.33	1,180,792.74
Perth	1907	152.5	7.5	160.0	1,773,131.28	801,605.76
Peterboro	1919	134.1	39.6	173.7	1,175,244.25	562,981.76
Prescott and Russell	1917	256.8	....	256.8	4,381,271.36	1,963,189.60
Prince Edward	1907	160.8	....	160.8	2,103,576.92	962,810.65
Renfrew	1918	196.1	....	196.1	3,229,870.73	1,571,139.48
Simcoe	1903	280.7	....	280.7	4,191,524.75	1,940,400.03
Stormont, Dundas and Glengarry	1917	504.5	....	504.5	5,605,185.98	2,729,070.86
Victoria	1917	163.2	....	163.2	2,653,898.89	1,315,963.69
Waterloo	1908	160.4	16.8	177.2	4,063,136.59	1,984,969.39
Welland	1912	101.7	16.4	118.1	4,801,642.94	2,221,469.70
Wellington	1903	283.2	23.5	306.7	3,853,096.01	1,799,948.67
Wentworth	1903	102.3	61.5	163.8	4,354,732.68	1,992,730.49
York	1911	44.4	239.8	284.2	13,178,426.26	6,174,513.25
Totals		7,298.9	735.3	8034.2	$134,830,465.05	$63,654,935.86

APPENDIX No. 7

SUMMARY, 1937 — WORK DONE ON COUNTY ROADS

Name of County	Miles of Road Surfaced					New Bridges	Pipe and Tile Culverts	Arch and Concrete Culverts
	Gravel or Stone	Surface Treated Gravel or Stone	Low-Cost Bituminous Surfaces	Mixed Macadam or Asphaltic Concrete	Cement Concrete			
Brant	2.83	2.00					11	1
Bruce	1.00	6.50	7.50			1	25	1
Carleton	8.15	8.20	2.33	1.30			30	
Dufferin	3.75						11	1
Elgin	.50		.50				7	1
Essex	.33					2	2	2
Frontenac		4.50	.10	1.70			5	1
Grey			2.30					
Haldimand	3.10	10.04				4	12	5
Halton	1.44		4.35				9	
Hastings	3.80		2.20				47	
Huron	2.00					1	26	2
Kent	15.50		3.70		1.10	2	7	
Lambton	9.40	.21						
Lanark	.75	4.00	2.50				43	
Leeds and Grenville	3.00		2.75	4.75		1	9	4
Lennox and Addington							12	
Lincoln						1	27	4
Middlesex	4.25					1	22	2
Norfolk	3.00		21.00				7	
Northumberland and Durham	4.00						34	6
Ontario	6.95		1.25				48	
Oxford	3.70					5	6	
Peel	.50						15	
Perth	9.50	5.75				1	19	
Peterboro	6.70		2.00			1	41	3
Prescott and Russell	9.50					2	3	
Prince Edward			3.40				32	
Renfrew						2	9	
Simcoe	4.00						40	3
Stormont Dundas and Glengarry			19.25				25	
Victoria	7.80	3.0	1.70				15	
Waterloo	7.50		3.25			2	24	2
Welland			1.29				9	1
Wellington	21.00		3.00				76	2
Wentworth	.30		4.40			1	13	1
York	5.56		3.29		1.84	4	164	9
Totals	149.81	44.20	92.06	7.75	2.94	31	885	51

SUMMARY OF COUNTY

APPENDIX

Name of County	Superintendence		Road and Culvert Construction	Urban Improvement		Bridge Construction	County Bridges	
	Construction	Maintenance		Construction	Maintenance		Construction	Maintenance
Brant	$ 2,224.30	$ 2,025.50	$ 27,671.85	$ 680.00	$ 1,202.55			
Bruce	2,079.00	2,488.70	54,263.64	817.22	2,636.34		1,633.34	
Carleton	4,595.59	4,867.35	66,661.64	3,497.42	224.00			70.01
Dufferin	3,061.51	1,377.97	15,234.34					
Elgin	2,000.00	1,115.93	34,486 96	4,852.01		187.00	368.95	
Essex	2,542.00	1,211.83			5,947.60	38,130.96		
Frontenac	2,000.00	1,403.20	23,141.43					
Grey	859.55	3,514.88	40,905.49	289.86	3,174.33		626.74	
Haldimand	2,584.00	2,575.33	33,934.06		3,395.00	2,209.53	6,189.94	97.28
Halton	1,310.00	1,650.36	30,183.48		4,943.48			
Hastings	1,612.93	1,473.48	41,539.83					600.49
Huron	2,068.01	2,443.16	49,586.68	2,355.53			635.16	124.95
Kent	2,224.00	2,225.03	80,266.80	8,104.02		3,283.30		
Lambton	2,000.00	1,990.05	18,993.49	1,574.54				
Lanark	1,563.12	2,330.14	18,817.82		2,923.09			
Leeds and Grenville	2,000.00	1,639.24	50,049.70			1,968.38		
Lennox and Addington	1,500.00	1,756.95	8,283.42	59.65				
Lincoln	2,479.21	2,485.32	30,031.66	2,126.10	5,002.24	1,122.15		130.56
Middlesex	3,597.64	3,302.11	16,525.34			5,156.65		1,167.85
Norfolk	3,000.00	2,094.44	105,072.46	8,167.25			605.95	
Northumberland & Durham	2,068.67	2,021.40	18.913.71				1,292.45	188.50
Ontario	1,900.36	3,358.30	15,081.05	4,923.55				694.71
Oxford	2,000.00	2,280.06	8,096.05			19,769.95	19,095.49	
Peel	1,123.74	2,110.00	20,182.64	1,640 49	115.00			7.50
Perth	2,180.00	1,102.44	34,273.15		2,268.77	2,702.21		179.79
Peterboro	2,605.89	593.14	25,372.17	2,575.00	564.92	4,681.74		6,487.88
Prescott and Russell	1,065.60	1,547.90	14,442 82		8,594.39	26,938.56		
Prince Edward	981.30	1,009.63	25,511.28	2,699.81				108.56
Renfrew	2,400.00	2,032.97	346.20		1,351.42	31,081.65	2,081.19	249.90
Simcoe	1,190.00	3,097.12	19,082.84	12,973.25				317.13
Stormont, Dundas and Glengarry	2,117.06	2,159.42	69,305.97	6,262.10	3,923.00			
Victoria	2,155 36	2,135.00	42,474.24		5,158.16			952.91
Waterloo	3,183.04	3,236.54	67,449.92		17,714.19	6,572.06		
Welland	1,864.00	2,409.21	23,673.93	1,320 43	5,303.47			681.43
Wellington	2,343.77	2,373.76	55,379.14		9,082.57			
Wentworth	3,730.00	3,551.26	61,603.59		2,501.02		2,174.77	
York	6,281.93	6,281.94	249,676.47	19,815.14		38,855.49		(at 40%) 41.55
Total	$ 84,491.58	$ 85,271.06	$ 1,496,515.26	$ 84,733.37	$ 86,025.54	$182,659.63	$ 34,703.98	$ 12,101.00

ROAD EXPENDITURES—1937

No. 8

Mainte-nance & Repair	Machinery		Total Approved Expenditure			Government Subsidy—50%		
	Con-struction	Mainte-nance	Con-struction	Mainte-nance	Total	Con-struction	Mainte-nance	Total
$ 17,672.16	$ 1,776.06	$ 7,985.80	$ 32,352.21	$ 28,886.01	$ 61,238 22	$ 16,176.10	$ 14,443.01	$ 30,619 11
54,439.94	7,670.01	6,923 48	66,463.21	66,488.46	132,951.67	33,231.60	33,244.23	66,475.83
61,465.75	4,291.02	5,837.06	79,045.67	72,464.17	151,509.84	39,522.84	36,232.08	75,754 92
21,491.41	4,918.60	368.08	23,214.45	23,237.46	46,451.91	11,607.22	11,618.73	23,225.95
48,519.18	1,788.87	561.05	43,683.79	50,196.16	93,879.95	21,841.89	25,098.08	46,939.97
38,426.69	6,657.11	1,745.38	47,330.07	47,331.50	94,661.57	23,665.04	23,665.74	47,330.78
24,488.92	3,603.31	2,358.22	28,744.74	28,250.34	56,995.08	14,372.37	14,125.17	28,497.54
39,505.34	4,553 26	1,516.89	47,234.90	47,711.44	94,946.34	23,617.45	23,855.72	47,473.17
41,414.20	3,838.21	304.89	48,755.74	47,786.70	96,542.44	24,377.87	23,893.35	48,271.22
35,007.41	3,237.68	1,490.84	34,731.16	43,092.09	77,823.25	17,365.58	21,546 04	38,911.62
40,129.77	1,414.92	2,364.35	44,567.68	44,568.09	89,135.77	22,283.84	22,284.05	44,567 89
68,104.43	3,816.08	7,842.65	58,461.46	78,515.19	136,976.65	29,230.73	39,257.59	68,488.32
86,770.47	....	5,076.85	93,878.12	94,072.35	187,950.47	46,939.06	47,036.17	93,975.23
24,154.52	5,436.99	1,814.01	28,005.02	27,958.58	55,963.60	14,002.51	13,979.29	27,981.80
25,111.56	....	2,650.14	20,380.94	33,014.93	53,395.87	10,190.47	16,507.47	26,697.94
31,890.53	717.25	401.68	54,735.33	33,931.45	88,666.78	27,367.67	16,965.72	44,333.39
13,471.45	7,080.96	1,380.79	16,924.03	16,609.19	33,533.22	8,462.02	8,304.59	16,766 61
29,004.94	4,273.00	2,869.20	40,032.12	39,492.26	79,521.38	20,016.06	19,746.13	39,762.19
53,721.46	9,395.00	11,691.32	34,674.63	69,882.74	104,557.37	17,337.31	34,941.37	52,278.68
59,199.20	....	6,860.70	116,845.66	68,154.34	185,000.00	58,422.83	34,077.17	92,500.00
27,821.98	11,831.33	3,428.80	34,106.16	33,460.68	67,566.84	17,053.08	16,730.34	33,783.42
40,068 03	5,793.72	4,410.68	27,698.68	48,531.72	76,230.40	13,849.34	24,265.86	38,115.20
46,728.97	430.25	4,733.25	49,391.74	53,742.28	103,134.02	24,695.87	26,871.14	51,567.01
46,071.26	4,028.59	2,069.75	26,975.46	50,373.51	77,348.97	13,487.73	25,186.75	38,674.48
14,971.67	143.08	643.19	39,298.44	19,165.86	58,464.30	19,649.22	9,582.93	29,232.15
26,221.74	....	1,250.63	35,234 80	35,118.31	70,353.11	17,617.40	17,559.15	35,176.55
54,119.71	1,097.00	103.64	43,543.98	64,365.64	107,909.62	21,771.99	32,182.82	53,954.81
29,317.81	3,211.00	1,967.60	32,403.39	32,403.60	64,806.99	16,201.70	16,201.80	32,403.50
25,699.09	456.00	1,079.18	36,365.04	30,412.56	66,777.60	18,182.52	15,206.28	33,388.80
69,084.64	8,835.21	2,245.51	42,081.30	74,744.40	116,825.70	21,040.65	37,372.20	58,412.85
73,388.06	1,743.00	....	79,428.13	79,470.48	158,898.61	39,714.06	39,735.24	79,449.30
33,663.36	1,059.37	3,060.58	45,688.97	44,970 01	90,658.98	22,844.49	22,485.00	45,329.49
53,844.78	1,960.00	4,349.96	79,165.02	79,145.47	158,310.49	39,582.51	39,572.73	79,155 24
32,858.85	6,121.53	1,151.07	32,979.89	42,404.03	75,383.92	16,489.95	21,202.01	37,691.96
54,306.70	10,379.94	2,863.84	68,102.85	68,626.87	136,729.72	34,051.42	34,313.44	68,364 86
66,541.57	13,163.47	3,628.93	80,671.83	76,222.78	156,894.61	40,335.91	38,111.39	78,447.30
216,711.67	5,376.09	11,714 85	320,005.12	234,750.01	554,755.13	160,002.56	117,370.85	277,373.41
1,725,409.22	$ 150,097.91	$ 120,744.84	$ 2,033,201.73	$ 2,029,551.66	$ 4,062,753.39	$ 1,016,600.86	$ 1,014,771.63	$ 2,031,372 49

APPENDIX

SCHEDULE OF EXPENDITURE ON MAINTENANCE

Name of County	Brushing and Weed Cutting	Ditching	Grading	Dragging
Brant	$ 1,980.88	$ 1,060.13	$ 162.64	$ 3,890.92
Bruce	3,888.37	492.10	527.65	8,727.21
Carleton	3,950.97	662.84	2,569.31	5,199.80
Dufferin	2,162.82	53.95	1,647.03	3,657.93
Elgin	2,153.72	1,188.07	5,632.13	5,851.13
Essex	3,495.05	1,413.83	943.01	5,329.31
Frontenac	4,029.33	389.65	5,112.68	1,556.34
Grey	2,377.03	1,806.61	1,869.60	5,094.81
Haldimand	4,203.83	467.28	519.87	3,028.55
Halton	2,521.20	1,615.13	188.24	4,545.79
Hastings	1,522.70	....	9,269.97	5,057.07
Huron	4,325.85	4,531.25	415.02	11,505.46
Kent	4,576.46	5,264.50	3,165.99	20,712.47
Lambton	1,829.15	1,216.23	22.20	10,368.11
Lanark	866.95	599.00	2,148.70	660.80
Leeds and Grenville	1,180.79	29.45	1,718.35	2,467.75
Lennox and Addington	779.16	176.00	1,075.34	....
Lincoln	3,656.45	763.21	407.75	24.68
Middlesex	4,395.43	978.47	5,094.23	10,951.38
Norfolk	1,590.87	1,107.96	5,800.34	3,510.78
Northumberland and Durham	993.60	3,336.58	3,247.00	2,299.44
Ontario	1,800.30	569.56	2,390.66	2,504.92
Oxford	2,754.00	126.57	2,558.71	8,872.68
Peel	1,651.14	353.60	993.73	2,434.99
Perth	1,511.65	606.06	5,528.30	1,860.97
Peterboro	759.91	164.04	1,138.13	6,158.11
Prescott and Russell	2,711.18	2,574.38	7,526.98	....
Prince Edward	1,029.20	366.68	5,835.23	1.60
Renfrew	958.93	258.49	4,569.99	806.42
Simcoe	1,936.54	1,374.13	476.45	12,245.57
Stormont, Dundas and Glengarry	3,657.62	352.85	7,607.56	....
Victoria	1,184.13	201.56	549.47	4,640.60
Waterloo	1,780.12	1,012.91	57.10	4,466.55
Welland	4,094.05	1,017.36	1,660.61	....
Wellington	3,451.30	1,480.13	782.12	7,158.80
Wentworth	6,603.64	4,498.18	2,573.71	5,110.38
York	14,962.25	7,394.20	13,390.75	3,635.40
Totals	$107,326.57	$ 49,502.94	$109,177.45	$ 174,336.72

No. 9— 1937

AND REPAIR OF COUNTY ROADS

Culverts (Repairs Only)	Bridges (Repairs Only)	Re-Surfacing	Stabilizing Oiling, Etc.	Snow Roads	Wire Fence Bonus and Guide Rail	Total Subsidisable Expenditure
$ 524.68	$ 108.08	$ 7,124.41	....	$ 1,348.56	$ 1,471.83	$ 17,672.16
212.09	287.00	24,076.68	12,225.88	4,002.96	....	54,439.94
1,571.66	1,115.95	28,111.03	8,833.30	8,058.59	1,392.30	61,465.75
91.75	30.20	9,533.01	2,799.14	1,507.80	7.75	21,491.41
1,424.06	1,521.20	26,135.45	2,553.37	532.48	1,527.57	48,519.18
294.38	78.48	11,517.56	14,955.38	203.25	196.44	38,426.69
1,750.39	827.34	3,882.30	897.63	5,757.36	285.90	24,488.92
227.90	439.55	18,221.21	1,992.87	5,474.82	2,000.94	39,505.34
1,780.10	473.56	25,941.18	3,389.02	684.97	925.84	41,414.20
788.81	291.60	22,477.86	598.12	1,980.66	....	35,007.41
2,541.42	1,820.07	11,896.11	5,926.87	2,095.56	....	40,129.77
1,301.64	647.30	28,770.44	12,907.62	3,213.13	486.72	68,104.43
787.04	17,247.79	32,616.48	....	....	2,399.71	86,770.47
324.32	486.59	9,366.49	396.12	62.03	83.28	24,154.52
1,747.18	4,212.99	12,694.66	....	1,749.53	431.75	25,111.56
558.63	59.72	23,684.71	1,786.47	277.04	127.62	31,890.53
162.58	461.83	9,256.80	....	1,313.04	246.70	13,471.45
41.10	222.89	21,120.70	....	1,218.55	1,549.61	29,004.94
1,066.31	3,087.05	21,044.70	4,098.90	3,004.99	....	53,721.46
1,282.01	653.36	40,437.67	914.60	2,709.52	1,192.09	59,199.20
997.01	151.38	13,870.33	765.28	2,038.57	121.89	27,821.98
579.49	546.97	20,117.92	3,557.73	7,371.80	628.68	40,068.03
986.33	955.64	20,598.96	3,318.30	5,370.51	1,187.27	46,728.97
225.80	78.79	27,628.18	6,913.65	4,059.38	1,732.00	46,071.26
21.05	1,102.52	1,616.23	....	2,452.84	272.05	14,971.67
337.48	5,573.59	7,895.15	2,806.14	718.12	671.07	26,221.74
318.85	1,272.30	38,403.48	....	1,312.54	....	54,119.71
2,033.91	935.74	15,189.87	2,112.47	1,353.73	459.38	29,317.81
1,413.15	239.42	9,617.22	5,120.08	2,715.39	....	25,699.09
2,947.00	718.42	32,997.67	5,791.75	6,618.78	3,978.33	69,084.64
1,036.16	724.44	52,773.36	4,255.34	2,980.73	....	73,388.06
493.53	18.56	20,029.24	1,915.75	4,205.28	425.24	33,663.36
382.93	237.75	28,784.42	10,304.86	3,588.01	3,250.13	53,844.78
555.41	2,286.43	10,794.34	8,934.76	3,088.74	427.15	32,858.85
3,375.05	1,164.05	32,282.98	1,600.87	2,646.40	365.00	51,306.70
800.49	....	30,098.04	13,617.40	3,239.73	....	66,541.57
375.71	1,389.91	106,456.12	23,732.18	45,375.15	....	216,711.67
$35,357.40	$51,468.46	$857,063.02	$169,021.85	$144,330.54	$27,824.27	$1,725,409.22

APPENDIX

SUMMARY OF EXPENDITURE

The following schedule shows the approved expenditure on township

Year	No. of Twps.	Roads and Culverts	Bridges	General Maintenance	Machinery	Superintendence
1920 to 1934	172 to 338	$ 17,415,367.95	$ 4,637,929.24	$30,941,679.92	$ 2,323,851.88	$ 2,671,828.52
1935	339	628,855.34	98,623.04	1,844,654.47	127,708.09	214,688.40
1936	343	462,196.19	103,438.46	1,989,872.85	166,772.95	225,333.70
1937	344	823,923.53	190,891.00	2,307,548.05	256,742.36	243,315.59
N.	77	437,584.71	46,212.11	416,876.89	64,803.52	13,425.80
Totals..........		$ 19,767,927.72	$ 5,077,093.85	$ 37,500,632.18	$ 2,939,878.80	$ 3,368,592.01

Note: "N" signifies townships previously subsidized by the Department of Northern

No. 10

ON TOWNSHIP ROADS

roads under the provisions of The Highway Improvement Act.

Total Approved Expenditure			Government Subsidy		
Construction	Maintenance	Total	Construction	Maintenance	Total
$23,718,523.99	$ 34,272,133.52	$ 57,990,657.51	$ 7,615,851.36	$ 10,959,400.20	$ 18,575,251.56
824,447.33	2,090,082.01	2,914,529.34	314,705.13	874,448.05	1,219,153.18
699,695.53	2,247,918.62	2,947,614.15	293,505.92	939,468.25	1,232,974.17
1,234,367.12	2,588,053.41	3,822,420.53	623,824.61	1,301,050.22	1,924,874.83
522,300.97	456,602.06	978,903.03	351,516.13	287,417.67	638,933.80
$26,999,334.94	$ 41,654,789.62	$ 68,654,124.56	$ 9,229,406.15	$ 14,361,784.39	$ 23,591,190.54

Development.

TOWNSHIP ROAD EXPENDITURES UNDER COLONIZATION ROAD BY-LAWS, NORTHERN DEVELOPMENT AGREEMENTS, ETC.

APPENDIX No. 11

County or District	By-Laws and Agreements		Direct Grants and Inspection	Locks, Dams, Bridges, etc.	Total Paid by Department
	Total Expenditure	Department's Share			
Algoma	$ 30,759.99	$ 15,183.89	....	....	$ 15,183.89
Cochrane North	11,394.41	5,665.77	....	....	5,665.77
Cochrane South	20,232.39	10,116.19	....	....	10,116.19
Fort William	42,960.56	21,476.86	....	....	21,476.86
Frontenac	20,342.38	9,868.00	12,187.52	5,815.90	27,871.42
Haliburton	25,294.17	12,536.50	49,681.26	4,588.91	66,806.67
Hastings	30,307.66	14,329.10	15,764.89	6,069.02	36,163.01
Kenora	6,868.13	3,434.07	....	....	3,434.07
Lanark	2,382.67	1,191.34	3,909.75	....	5,101.09
Lennox and Addington	7,883.73	3,941.85	1,878.85	2,142.48	7,963.18
Leeds and Grenville	5,962.15	2,877.86	2,010.75	552.52	5,441.13
Manitoulin	16,686.43	8,273.25	....	75.00	8,348.25
Muskoka	92,823.43	45,406.09	50,799.93	11,914.85	108,120.87
Nipissing	37,163.96	18,406.90	....	1,641.32	20,048.22
Norfolk	....	....	6,308.07	....	6,308.07
Ontario	4,874.23	1,750.00	....	....	1,750.00
Parry Sound	70,845.67	34,931.95	30,369.31	13,419.44	78,720.70
Peterborough	5,866.40	2,933.19	15,273.24	2,849.64	21,056.07
Port Arthur	20,563.18	10,089.06	....	....	10,089.06
Rainy River	40,815.21	20,271.22	....	75.00	20,346.22
Renfrew	28,417.88	14,069.88	15,815.14	8,567.73	38,452.75
Sault Ste. Marie	7,965.98	3,973.45	....	....	3,973.45
Simcoe	39,268.57	18,713.55	16,141.31	7,198.12	42,052.98
Sudbury	36,218.13	17,679.45	....	100.00	17,779.45
Temiskaming	60,807.25	29,993.44	....	....	29,993.44
Victoria	25,742.57	12,856.37	6,107.22	7,707.40	26,670.99
	$692,447.13	$339,969.23	$226,247.24	$ 72,717.33	$638,933.80

APPENDIX
ROAD SURFACES

County	COUNTY ROADS					
	Earth	Gravel or Stone	Surface Treated Macadam	Bituminous Macadam	Asphaltic Concrete	Cement Concrete
Brant	1.2	65.8	0.3	10.5		0.9
Bruce		197.7	8.3	21.6		1.1
Carleton	14.4	121.9	22.0	32.0	52.5	
Dufferin		138.5				1.1
Elgin		210.8		1.7		0.2
Essex		185.5		17.4	5.1	48.9
Frontenac		102.2	43.7	4.5	9.5	
Grey		189.1		23.9	0.7	0.5
Haldimand	3.5	74.6	57.7	8.6	1.7	
Halton		106.1		7.2		21.3
Hastings		247.9		24.2	6.6	2.3
Huron		347.0	15.2	11.4	1.1	5.4
Kent		240.2		18.9	3.8	28.8
Lambton		226.9		10.8	2.2	2.6
Lanark	9.7	161.0	18.1	13.4	17.8	
Leeds and Grenville	38.9	141.3	4.0	26.8	32.0	2.8
Lennox and Addington		71.0	16.0	2.0	44.0	
Lincoln		0.7	94.7	25.0	2.6	12.2
Middlesex		358.0				38.8
Norfolk	5.5	74.3		122.2		
Northumberland and Durham		191.1		8.1	32.4	
Ontario		162.7	4.9	9.8	0.3	6.7
Oxford		188.4		9.7		
Peel		107.1		3.7	11.7	2.8
Perth		148.3	8.2		3.5	
Peterboro		166.0		7.7		
Prescott and Russell	26.6	124.8	86.8		18.6	
Prince Edward		85.3	44.1	10.5	11.7	9.2
Renfrew	38.6	114.8	35.5	7.2		
Simcoe		279.5		1.2		
Stormont, Dundas and Glengarry	5.0	246.4	165.5	86.4		1.2
Victoria		150.8		10.0	2.4	
Waterloo		100.3	11.7	26.3	4.9	34.0
Welland	1.6		74.4	12.0	19.8	10.3
Wellington		284.1		5.7	3.5	13.4
Wentworth	2.9	78.3	46.8	28.8	4.0	3.0
York	3.0	65.1	68.4	8.8	126.9	12.0
Totals	150.9	5,753.5	826.3	618.0	419.3	259.5

No. 12
— END OF 1937

	TOWNSHIP ROADS						
Total	Earth	Gravel or Stone	Surface Treated Macadam	Bituminous Macadam	Asphaltic Concrete	Cement Concrete	Total
78.7	208.8	339.6	....	....	0.3	....	548.7
228.7	260.1	1,357.0	....	....	....	....	1,617.1
242.8	352.8	714.0	4.0	....	....	....	1,070.8
139.6	197.8	598.2	....	....	....	....	796.0
212.7	158.5	759.9	....	....	....	....	918.4
256.9	128.3	781.7	....	....	....	36.3	946.3
159.9	521.3	394.4	....	1.0	....	....	916.7
214.2	507.0	1,707.3	....	....	....	....	2,214.3
146.1	193.5	378.8	8.9	....	....	5.0	586.2
134.6	37.8	362.5	....	....	....	....	410.3
281.0	436.5	1,002.9	....	....	....	....	1,439.4
380.1	222.0	1,372.3	....	....	0.7	....	1,595.0
291.7	269.5	1,083.3	....	0.4	....	....	1,353.2
242.5	401.5	1,041.0	2.0	....	....	....	1,444.5
220.0	562.9	420.6	1.0	....	....	....	984.5
245.8	544.8	852.2	....	1.5	6.0	....	1,404.5
133.0	288.2	383.8	....	0.5	....	....	672.5
135.2	382.8	279.9	4.1	....	....	3.0	669.8
396.8	226.5	1,375.2	....	....	....	0.2	1,601.9
202.0	547.1	374.8	....	....	....	....	921.9
231.6	973.4	1,275.5	....	....	....	....	2,248.9
184.4	252.5	962.1	....	....	....	....	1,214.6
198.1	74.9	988.0	....	4.8	....	....	1,067.7
125.3	246.7	380.9	....	....	....	....	627.6
160.0	78.8	990.7	....	....	....	....	1,069.5
173.7	362.9	589.5	....	....	....	....	952.4
256.8	752.5	230.6	....	....	....	....	983.1
160.8	61.1	359.0	....	....	....	....	420.1
196.1	529.8	278.4	....	....	....	....	808.2
280.7	740.0	1,247.3	....	....	....	....	1,987.3
504.5	576.9	749.7	....	3.6	....	4.9	1,335.1
163.2	192.9	783.9	....	....	....	....	976.8
177.2	62.5	531.0	....	....	....	0.2	593.7
118.1	466.2	372.8	93.3	1.5	6.2	0.8	940.8
306.7	590.3	745.6	....	....	....	0.4	1,336.3
163.8	156.8	394.4	....	....	....	....	551.2
284.2	538.0	1,013.2	29.5	6.6	89.7	15.3	1,692.3
8,027.5	13,103.9	27,482.0	142.8	19.9	102.9	66.1	40,917.6

APPENDIX No. 13

WORK DONE ON TOWNSHIP ROADS — SUMMARY, 1937

Name of County	Miles of Road Surfaced					New Bridges	Pipe and Tile Culverts	Arch and Concrete Culverts
	Gravel or Stone	Surface Treated Gravel or Stone	Low-Cost Bituminous Surfaces	Mixed Macadam or Asphaltic Concrete	Cement Concrete			
Brant	23.00	2.0	......	......	......	......	75	......
Bruce	11.6	......	.33	......	......	7	73	5
Carleton	11.0	1.25	......	......	......	8	27	2
Dufferin	19.5	......	.25	......	......	1	65	11
Elgin	6.0	......	......	......	......	2	44	2
Essex	24.00	......	......	......	......	5	15	8
Frontenac	10.0	......	......	......	......	......	12	3
Grey	22.0	......	......	......	......	7	63	19
Haldimand	16.5	......	......	......	......	2	17	......
Halton	10.40	......	......	......	......	......	23	1
Hastings	3.00	......	......	......	......	......	63	1
Huron	3.6	......	0.4	......	......	3	22	7
Kent	17.00	......	......	......	......	1	21	1
Lambton	58.00	......	......	......	......	2	75	4
Lanark	6.00	......	......	......	......	......	39	......
Leeds and Grenville	15.0	......	3.5	......	......	1	40	4
Lennox and Addington	......	......	......	......	......	1	17	......
Lincoln	20.25	0.7	......	......	......	3	78	2
Middlesex	8.5	......	......	......	......	8	87	7
Norfolk	12.2	......	......	......	......	2	24	1
Northumberland and Durham	38.75	......	......	......	......	5	84	6
Ontario	14.37	......	......	......	......	3	70	5
Oxford	13.1	......	......	......	......	5	27	2
Peel	8.17	......	......	......	......	2	44	......
Perth	2.5	......	......	......	......	3	31	7
Peterboro	12.25	......	......	......	......	......	63	......
Prescott and Russell	20.0	......	......	......	......	4	30	2
Prince Edward	6.00	......	......	......	......	......	9	......
Renfrew	.25	......	......	......	......	......	......	......
Simcoe	35.60	......	......	......	......	11	90	8
Stormont, Dundas Glengarry	5.5	......	......	......	......	9	57	7
Victoria	7.0	......	......	......	......	......	81	4
Waterloo	16.5	......	......	......	......	1	39	2
Welland	17.75	2.25	......	......	......	......	99	1
Wellington	16.0	......	......	......	......	1	125	8
Wentworth	18.75	......	......	......	......	3	53	2
York	9.31	......	5.00	0.48	0.13	5	238	2
Totals	539.35	6.20	9.48	0.48	0.13	105	2020	134

APPENDIX No. 14 — SUMMARY OF 1937 COUNTY LEVIES ON BASIS OF EQUALIZED ASSESSMENT

Name of County	Equalized Assessment		Roads and Bridges					Other Purposes			
			The King's Highways		County Roads and Bridges		Total	Educational	Miscellaneous	Totals	Total Levy
	Total	Per Acre	Debentures	Current	Debentures	Current					
			Mills	Mills	Mills	Mills	Mills	Mills	Mills	Mills	Mills
Brant	$19,826,800	90	.74	....	1.43	1.33	3.50	2.01	1.74	3.75	7.25
Bruce	28,639,030	30	....	....	....	2.81	2.81	2.04	3.15	5.19	8.00
Carleton	28,808,028	45	3.25	....	5.28	.82	9.35	2.59	6.19	8.78	18.13
Dufferin	13,364,550	37	2.16	....	....	1.70	3.86	1.49	1.71	3.20	14.11
Elgin	30,340,345	69	....	.46	....	1.65	2.11	1.68	1.61	3.29	5.40
Essex	51,693,612	120	....	....	.83	1.00	1.83	.71	3.37	4.08	5.91
Frontenac	7,246,850	11	7.00	....	....	5.00	12.00	4.50	5.50	10.00	22.00
Grey	25,764,375	23	.95	2.03	.83	1.53	5.34	2.52	3.14	5.66	11.00
Haldimand	11,920,010	42	3.23	....	1.67	4.50	9.40	....	5.10	5.10	14.50
Halton	31,913,780	140	.84	....	1.43	1.00	3.27	2.27	1.46	3.73	7.00
Hastings	18,302,800	17	....	3.50	.75	2.50	6.75	2.20	6.05	8.25	15.00
Huron	44,271,175	55	.35	....	....	1.70	2.05	1.15	1.75	2.90	4.95
Kent	39,828,700	107	....	....	....	2.45	2.45	1.43	2.92	4.35	6.80
Lambton	30,084,500	45	....	1.68	....	.95	2.63	1.99	2.03	4.02	6.65
Lanark	15,000,000	22	1.88	....	5.50	1.17	8.55	.11	3.88	3.99	12.54
Leeds and Grenville	17,672,000	24	1.61	2.82	2.91	2.49	9.83	3.52	4.79	8.31	18.14
Lennox and Addington	9,638,095	22	1.50	....	7.90	1.90	11.30	2.80	5.90	8.70	20.00
Lincoln	19,000,000	99	1.47	....	6.88	1.99	10.34	.18	6.28	6.46	16.80
Middlesex	51,045,045	67	2.08	....	.49	.91	3.48	2.13	2.89	5.02	8.50
Norfolk	30,227,300	77	.61	....	1.51	3.08	5.20	1.05	3.41	4.47	9.67
North'land and Durham	35,580,020	44	.94	.77	1.52	.98	4.21	2.95	3.34	6.29	10.50
Ontario	23,768,327	46	2.31	....	.75	2.18	5.24	1.66	4.35	6.01	11.25
Oxford	28,790,200	61	.83	....	.70	1.80	3.33	1.42	2.20	3.62	6.95
Peel	19,902,146	68	2.31	.87	1.59	2.25	7.02	2.96	2.57	5.53	12.55
Perth	35,289,166	67	....	....	....	.88	.88	.84	2.02	2.86	3.74
Peterborough	10,787,760	18	....	....	1.53	2.81	4.34	1.56	3.79	5.35	9.69
Prescott and Russell	20,555,591	37	....	....	7.19	2.00	9.19	1.78	6.27	8.05	17.24
Prince Edward	15,000,000	63	.41	....	.85	2.25	3.51	.60	2.98	3.58	7.09
Renfrew	28,460,230	26	1.08	.04	4.11	.14	5.37	1.40	3.39	4.79	10.16
Simcoe	59,670,000	62	....	1.00	....	1.00	2.00	1.20	2.80	4.00	6.00
Storm't, Dun's Glen'y	39,830,930	51	.82	.91	1.21	1.88	4.82	1.60	3.92	5.52	10.34
Victoria	19,200,091	32	.87	....	.69	2.87	4.43	.16	3.52	3.68	8.11
Waterloo	38,201,000	97	.29	....	....	2.00	2.29	.49	2.43	2.92	5.21
Welland	41,163,351	183	....	.56	....	.87	1.43	.10	3.34	3.44	4.87
Wellington	35,303,876	57	....	....	....	2.00	2.00	1.48	2.02	3.50	5.50
Wentworth	29,079,491	109	3.98	....	.04	2.20	6.22	1.42	1.58	3.00	9.22
York	132,072,878	249	.65	.23	.38	1.34	2.60	5.08	2.79	7.87	10.47

APPENDIX

SUMMARY OF COUNTY AND

NAME OF COUNTY	TOWNSHIP ASSESSMENTS (Exclusive of Urban Assessments)		COUNTY LEVY BASED ON EQUALIZED				
			King's Highway		County Roads		Education
	Equalized	Local	Debent.	Current	Debent.	Current	
Brant	$ 16,752,000	$ 12,963,603	$ 12,363	$......	$ 24,022	$ 22,247	$ 33,621
Bruce	23,223,034	22,222,998	....	....	....	65,247	47,384
Carleton	21,919,050	16,776,533	71,300	....	115,808	17,834	56,818
Dufferin	11,386,943	8,713,111	24,593	....	....	19,353	16,961
Elgin	26,193,987	21,520,255	....	11,971	....	43,168	44,032
Essex	37,903,318	30,977,202	....	....	31,449	37,903	34,011
Frontenac	7,054,168	5,785,531	49,379	....	....	25,308	31,742
Grey	22,052,187	21,412,251	21,004	44,740	18,307	33,738	55,570
Haldimand	10,335,010	10,657,739	33,409	....	17,258	46,508	35,000
Halton	21,265,908	12,546,454	17,979	....	47,099	21,266	49,835
Hastings (part)	8,140,400	7,532,954	....	28,492	6,107	20,351	17,909
Huron	38,103,105	32,919,373	13,337	....	....	64,784	43,904
Kent	33,744,500	28,524,315	....	....	....	82,674	54,754
Lambton	26,744,800	25,202,288	....	44,925	....	25,346	53,340
Lanark	9,344,500	7,248,153	17,593	....	51,448	10,902	1,012
Leeds and Grenville	16,125,600	14,949,692	25,995	45,625	47,411	40,313	47,198
Lennox and Addington	8,271,112	6,917,282	12,407	....	65,341	15,715	23,157
Lincoln	13,735,100	12,037,884	20,193	....	94,485	27,289	71,769
Middlesex	47,536,687	40,090,661	98,924	....	23,197	43,401	101,205
Norfolk	21,459,700	15,847,285	13,004	....	32,533	66,052	22,747
Northumberland and Durham	24,164,425	20,162,310	22,739	18,607	36,778	23,778	71,164
Ontario	19,352,955	18,992,890	44,713	....	14,664	42,119	41,723
Oxford	25,620,400	24,580,005	21,239	....	17,831	46,272	36,405
Peel	14,888,795	13,077,624	34,431	12,997	25,612	33,499	51,665
Perth	32,146,243	24,962,706	....	....	....	28,219	27,050
Peterborough	9,636,270	8,243,845	....	....	14,724	27,136	15,004
Prescott and Russell	17,963,401	13,201,502	....	....	129,159	35,926	31,974
Prince Edward	10,708,750	7,700,642	4,391	....	9,102	24,094	6,425
Renfrew (part)	13,686,120	8,011,680	14,806	581	56,250	1,915	19,141
Simcoe	35,039,000	26,233,721	....	35,039	....	35,039	42,047
Stormont, Dundas and Glengarry	27,146,806	26,029,050	22,260	24,701	32,846	51,034	43,433
Victoria	13,735,986	11,274,323	11,992	....	9,478	39,477	2,170
Waterloo	20,916,000	16,726,339	5,999	....	....	41,832	10,395
Welland	27,441,199	25,640,482	....	15,377	....	24,011	71,387
Wellington	28,660,737	23,251,596	....	....	....	57,317	42,417
Wentworth	25,498,456	18,825,373	101,440	....	1,163	56,119	36,257
York	93,978,990	91,620,696	61,018	21,346	35,992	125,646	390,159
Totals	861,875,642	733,380,348	776,508	304 401	958,064	1,422,832	1,780,785

No. 15

TOWNSHIP LEVIES — 1937

ASSESSMENT		TOWNSHIP LEVY BASED ON TOWNSHIP ASSESSMENT						
Miscellaneous	Total	County Levy	Township Roads	Education	Miscellaneous	Total Levy	Total Road Levy	Per cent. of Road Levy to Total Levy
$ 29,199	$ 121,452	$ 121,602	$ 38,360	$ 90,375	$ 89,260	$ 339,597	$ 96,992	28.56
73,144	185,775	186,561	69,718	134,401	53,714	444,394	134,965	30.41
135,633	397,393	391,410	61,380	207,868	188,774	849,432	266,322	31.33
19,483	80,390	80,819	32,433	74,437	27,328	215,017	76,379	35.50
42,146	141,317	142,778	51,170	118,141	56,698	368,787	106,309	28.90
127,746	231,109	225,428	69,928	217,380	391,705	904,441	139,280	15.49
38,794	145,223	150,845	27,275	77,377	38,961	294,458	101,962	34.60
69,218	242,577	221,644	82,098	172,660	48,654	525,056	199,887	38.03
52,683	184,858	171,400	34,216	69,203	40,533	315,352	131,391	41.66
30,973	167,152	166,855	28,050	72,932	72,204	340,041	114,394	33.60
49,249	122,108	121,684	16,090	54,614	24,592	216,980	71,040	32.70
66,842	188,867	195,020	48,340	166,070	145,313	554,743	126,461	22.80
98,492	235,920	235,861	102,270	192,948	221,564	752,643	184,944	24,57
54,229	177,840	175,779	70,222	150,461	139,370	535,832	140,493	26.22
36,224	117,179	135,275	20,524	66,981	35,463	258,243	100,467	38.70
77,315	283,857	285,363	56,175	151,491	61,408	554,437	215,519	38.87
48,780	165,400	161,032	25,305	60,872	38,256	285,465	118,768	41.50
86,277	300,013	278,058	47,427	117,485	76,905	519,875	189,394	36.44
137,332	404,059	406,502	71,971	199,237	88,591	766,301	237,493	31.00
73,199	207,535	219,197	42,476	100,266	36,730	398,669	154,065	38.60
80,660	253,726	256,500	78,428	174,109	56,379	565,416	180,330	31.89
84,117	227,336	216,675	51,896	153,751	84,613	506,935	153,392	30.30
56,365	178,112	170,703	63,154	142,516	60,280	436,653	148,496	34.00
38,202	196,406	155,232	51,991	159,575	138,849	505,647	158,530	31.30
64,984	120,253	120,094	45,573	105,692	58,688	330,047	73,792	22.40
36,502	93,366	96,627	34,165	88,094	40,061	258,947	76,025	29.36
112,630	309,689	310,654	45,700	147,262	94,056	597,672	210,785	35.30
31,912	75,924	76,558	15,966	66,519	17,693	176,736	53,553	30.40
46,357	139,050	37,930	4,150	15,578	10,471	68,129	77,702	30.42
98,109	210,234	213,192	89,164	219,485	148,991	670,832	159,242	23.70
106,414	280,688	300,538	75,650	251,864	182,323	810,375	206,491	25.50
48,282	111,399	121,210	45,316	104,470	33,729	304,725	106,263	34.87
50,828	109,054	113,410	40,804	107,813	66,632	328,659	88,635	38.70
91,721	202,496	166,139	75,216	287,906	331,971	861,232	114,604	13.31
57,895	157,629	160,487	50,927	140,155	50,515	402,084	108,244	26.90
40,193	235,172	236,732	46,212	147,468	68,765	499,177	204,934	41.05
262,516	896,677	884,273	349,488	2,049,256	2,967,532	6,250,549	593,490	9.50
2,654,645	7,897,235	7,710,067	2,159,228	6,856,712	6,287,571	23,013,578	5,621,033	24.42

APPENDIX No. 16 COUNTY LEVIES ON URBAN CENTRES — 1937

Name of County	Urban Assessments		County Levy Based on Equalized Assessment						
	Equalized	Local	King's Highway Debent.	King's Highway Current	County Roads Debent.	County Roads Current	Education	Miscellaneous	Total
Brant	$3,074,800	$2,623,387	$2,269	$	$4,410	$4,083	$6,171	$5,359	$22,292
Bruce	5,415,996					15,216	11,051	17,061	43,328
Carleton	3,888,978	4,256,075	12,650		20,548	3,163	10,081	21,065	70,507
Dufferin	1,977,607	2,589,131	4,270			3,361	2,947	3,384	13,962
Elgin	4,146,358			1,894		6,834	6,970	6,671	22,369
Essex	13,790,294	15,665,470			11,442	13,790	2,605	46,478	74,315
Frontenac	192,780		1,350				867	1,062	3,279
Grey	3,935,000		3,732	7,988	3,271	6,019	9,914	12,341	43,265
Haldimand	1,585,000	4,015,052	5,124		2,647	7,132		8,079	22,982
Halton	10,647,872	8,808,236	9,003		13,541	10,648	6,383	15,506	55,081
Hastings	2,526,900			8,844	1,895	6,320	5,560	15,290	37,909
Huron	6,168,070	7,009,053	2,157			10,484	7,109	10,823	30,573
Kent	6,084,200	7,971,755				14,906	2,251	17,758	34,915
Lambton	3,339,700	4,884,737		5,609		3,154	6,660	6,771	22,194
Lanark	4,401,000	5,553,947	8,285		24,231	5,135	476	17,061	55,188
Leeds and Grenville	1,546,400		2,493	4,375	4,802	3,865	500	7,415	23,450
Lennox and Addington	1,366,983		2,050		10,799	2,597	3,827	8,066	27,339
Lincoln	5,264,900	6,091,655	7,740		36,218	10,461	2,397	33,071	89,887
Middlesex	3,508,358		7,301		1,711	3,204	7,469	10,136	29,821
Norfolk	8,867,600		5,373		13,442	27,294	9,400	30,248	85,757
Northumberland and Durham	11,415,595	11,104,796	10,742	8,790	17,375	11,233	33,619	38,105	119,864
Ontario	4,415,372	4,841,990	10,201		3,345	9,609	1,156	19,192	43,503
Oxford	3,169,800		2,628		2,206	5,725	4,504	6,973	22,036
Peel	5,013,351	7,014,307	11,595	4,376	7,967	11,281	942	12,863	49,024
Perth	3,142,923	3,194,413				2,758	2,644	6,354	11,756
Peterborough	1,151,490	1,231,129			1,759	3,243	1,793	4,362	11,157
Prescott and Russell	2,592,190	3,415,917			18,638	5,185	4,614	16,252	44,689
Prince Edward	4,291,250		1,759		3,648	9,655	2,575	12,788	30,425
Renfrew	10,194,998	10,769,839	11,031	428	41,901	1,428	14,263	34,530	103,581
Simcoe	24,631,000	23,218,107		24,631		24,631	29,557	68,967	147,786
Stormont, Dundas and Glengarry	12,684,124	12,724,925	10,401	11,540	15,346	23,846	20,294	49,718	131,145
Victoria	5,464,105	5,760,494	4,770		3,770	15,704	863	19,206	44,313
Waterloo	17,285,000	13,866,199	4,959			34,571	8,590	42,003	90,123
Welland	13,722,152	14,723,107		7,689		12,007	17,104	45,866	82,666
Wellington	6,643,139	5,216,895				13,285	9,831	13,419	36,535
Wentworth	3,581,035	5,189,392	14,246		164	7,882	5,092	5,644	33,028
York	38,093,888	40,157,363	24,732	8,654	14,591	50,930	154,443	106,409	359,759
Totals	259,220,208	230,789,371	180,861	94,818	279,667	400,639	414,522	799,296	2,169,803

APPENDIX

TYPICAL TAXATION ON

The local assessment of a representative township in each County has been farm of

County	Typical Township	Farm Assessment	Total Taxes	Total Road Tax
Brant	Dumfries S.	$ 5,470.00	$ 122.30	$ 37.03
Bruce	Bruce	2,800.00	53.90	30.52
Carleton	Fitzroy	2,429.00	92.35	40.37
Dufferin	Garafraxa E.	2,300.00	49.91	19.78
Elgin	Malahide	4,400.00	83.60	22.00
Essex	Gosfield S.	9,780.00	178.29	35.60
Frontenac	Portland	1,380.00	73.28	24.98
Grey	Normanby	3,300.00	59.40	22.44
Haldimand	Rainham	4,630.00	127.88	60.74
Halton	Esquesing	3,500.00	99.05	39.13
Hastings	Tyendinaga	2,100.00	64.05	18.38
Huron	Hay	4,582.00	108.76	20.14
Kent	Howard	5,100.00	88.59	23.10
Lambton	Plympton	3,739.00	62.70	19.44
Lanark	Lanark	1,295.00	42.02	17.61
Leeds and Grenville	Augusta	1,700.00	72.42	25.50
Lennox and Addington	Adolphustown	2,760.00	105.98	43.05
Lincoln	Clinton	7,250.00	221.05	115.35
Middlesex	Caradoc	4,600.00	90.48	26.17
Norfolk	Walsingham N.	3,500.00	89.18	32.23
Northumberland and Durham	Cavan	2,500.00	67.23	22.80
Ontario	Reach	3,300.00	69.63	27.06
Oxford	Oxford W.	5,800.00	104.75	29.00
Peel	Chinguacousy	5,100.00	118.93	53.55
Perth	Fullerton	5,665.00	74.91	10.58
Peterborough	Douro	2,300.00	63.53	20.08
Prescott and Russell	Plantagenet S.	3,187.00	108.93	41.91
Prince Edward	Hillier	3,500.00	98.00	22.79
Renfrew	McNab	1,650.00	72.19	21.63
Simcoe	Flos	3,200.00	82.98	17.28
Stormont, Dundas and Glengarry	Roxborough	2,446.00	79.25	22.43
Victoria	Verulam	2,200.00	57.49	21.71
Waterloo	Wilmot	5,117.00	149.20	30.10
Welland	Humberstone	7,450.00	175.15	37.10
Wellington	Eramosa	4,754.00	103.49	17.98
Wentworth	Flamboro E.	7,640.00	256.40	86.71
York	Markham	7,600.00	178.60	41.80

No. 17

A 100-ACRE FARM — 1937

arranged to show the proportion of road taxes to the total taxes on the basis of a 100 Acres.

Distribution of Road Tax			Road Taxes Per Mile			Debentures	
King's Highways	County Roads	Township Roads	King's Highways	County Roads	Township Roads	King's Highways	County Roads
$ 5.74	$ 21.44	$ 9.85	.08	.23	.11	$ 5.74	$ 11.14
....	23.52	7.00	....	.09	.06	....	....
10.52	19.70	10.15	.10	.08	.12	10.52	17.10
6.44	5.29	8.05	.13	.04	.09	6.44	....
2.51	9.06	10.43	.02	.04	.08	....	....
....	25.82	9.78	....	.10	.01	....	8.11
12.01	8.56	4.41	.08	.06	.04	12.06	....
8.91	6.93	6.60	.05	.03	.03	5.28	6.60
12.91	24.68	23.15	.20	.16	.47	6.67	12.91
6.75	19.39	12.99	.09	.14	.11	6.74	11.41
7.35	6.82	4.21	.08	.02	.03	....	1.55
1.68	8.17	10.29	.14	.50	.07	1.68	8.17
....	13.77	9.33	....	.04	.01	....	....
7.17	4.04	8.23	.05	.02	.01	....	....
2.85	10.09	4.67	.04	.04	.04	2.85	8.26
9.48	11.77	4.25	.04	.05	.03	3.43	6.46
5.24	34.50	3.31	.06	.27	.12	5.24	27.79
12.04	72.50	30.81	.23	.52	.29	12.04	56.25
11.77	7.96	6.44	.06	.02	.04	11.77	2.76
2.73	20.75	8.75	.04	.10	.09	2.73	6.86
5.20	7.60	10.00	1.08	.36	.07	2.85	4.62
7.59	9.57	9.90	.06	.05	.07	7.60	2.50
5.10	15.20	8.70	.06	.08	.12	5.10	4.23
15.71	18.97	18.87	.17	.15	.11	11.48	7.88
....	5.62	4.96	....	.44	.05	....	5.62
....	12.26	7.82	....	.40	.10	....	4.32
....	32.73	9.18	....	.13	.10	....	25.61
1.44	10.85	10.50	.03	.06	.13	1.43	2.98
3.48	13.20	4.95	.06	.06	.05	3.36	12.78
4.16	4.16	8.96	.02	.01	.06	....	....
1.35	7.78	10.35	.04	.02	.11	2.06	3.04
2.18	8.89	10.64	.16	.43	.10	2.18	1.72
1.91	13.35	11.80	.21	.38	.11	1.91	13.35
4.32	6.70	26.08	.05	.06	.27	....	....
....	10.40	7.58	....	.35	.10	....	10.39
42.25	23.83	20.63	.34	.13	.21	42.25	.46
6.31	12.39	23.10	.05	.04	.17	4.67	2.81

APPENDIX No. 18

1937 TOWNSHIP ROAD WORK DONE THROUGH DIRECT GRANTS

NAME OF DISTRICT	Cutting & Burning (New Rd.)	Side Brushing (Existing Road)	Stumping and Grubbing	Cross Lay	Grading (New Rd.)	Re-grading (Existing Road)	Ditching	GRAVELLING				CLAY SURFACING		CRUSHED ROCK			Dragging Miles	Guard Rail Erected	CULVERTS			BRIDGES		EXCAVATION	
								New		Repairs															
	Length Miles	Length Miles	Length Miles	Length Miles	Length Miles	Length Miles	Cu. Yds.	Length Miles	No. Cu. Yds. Gravel Used	Length Miles	No. Cu. Yds. Gravel Used	Length Miles	Cu. Yds. Clay Used	No. of Cu. Yds. Crushed	No. of Cu. Yds. Hauled	Length of Road Covered Miles		Length Feet	Wood	Stone or Concrete	Metal	No.	Description	Rock Cu. Yds.	All other Materials Cu. Yds.
Frontenac	.7	26	.7		.7	335	2,600			59	4,360						146		8	2	1	9	New	1,200	3,400
Hastings East and Hastings West	1	6	1	.25		6	1,500	4.75	1,250	11	1,350			1,100	1,100	5.5	46.5				14			2,950	7,000
Lanark						1.75	150			7.5	1,438	.75	200				14		1					350	
Leeds		12								13	1,600								1	1					
Lennox and Addington	1.5	6	1.5		1.5	2	300	1.5	90	16	470						32		4			4	New	130	1,100
Muskoka and Haliburton	2.12	5	3.45		4.57	39.46	7,530			84.59	16,675	.25	80				88.5		35	1	5	29	4 New 25 Repair	23,450.2	69,000
Nipissing					2.25	.5		2.25											2			2	New		
Parry Sound	2.51	14.98	2.99		4.77	11.05	6,666	2.70	767	61.55	11,778	1.1	1,047				623.45	2,310	84	1		7	7 Repair	832	6,395
Peterborough and Victoria	1		1		1.5	24.25	2,747	7	1,450	31	5,275			400	400	2		900			11	3	New	5,124	6,515
Renfrew	.50	3.75	.25		7	17.25	1,553	14.75	2,776	19.5	3,808	.51	300				22	80	26	2		21	4 New 17 Repair	1,865	3,315
Simcoe Centre and Simcoe East		2.26	1.5		2.08	4.57	445	1.10	216	10.98	3,062	.35	100		664	3.85	28.55			1	4	1	New	75	2,970
TOTALS	9.33	75.99	12.39	.25	24.37	441.83	23491.	34.05	6,549	314.12	49,816	2.96	1,727	1,500	2,164	11.35	1,001	3,290	161	8	35	76	27 New 49 Repair	35,976.2	99,695

APPENDIX No. 19

1937 TOWNSHIP ROAD WORK DONE UNDER BY-LAWS AND AGREEMENTS

NAME OF DISTRICT	Snow Plowing	Cutting & Burning (New Rd.)	Side Brushing (Existing Road)	Stumping and Grubbing	Cross Lay	Grading (New Rd)	Re-grading (Existing Road)	Ditching	GRAVELLING				CLAY SURFACING		CRUSHED ROCK			Dragging Miles	Guard Rail Erected	CULVERTS			BRIDGES	EXCAVATION	
									New		Repairs													Rock	All other Materials
	Miles	Length Miles	Length Miles	Length Miles	Length Miles	Length Miles	Length Miles	Cu. Yds.	Length Miles	No. Cu. Yds. Gravel Used	Length Miles	No. Cu. Yds. Gravel Used	Length Miles	Cu. Yds. Clay Used	No. of Cu. Yds. Crushed	No. of Cu. Yds. Hauled	Length of Road Covered Miles		Length Feet	Wood	Stone or Concrete	Metal	No.	Cu. Yds.	Cu. Yds
Algoma-Manitculin and Sault Ste. Marie	....	2.2	55.86	2.99	....	6.59	406.98	8,641.1	36.55	3,373.5	348.55	32,495	14.65	2,492.75	....	....	7.25	1,396.25	502	106	55	10	13 R 27	995.25	2,406
Cochrane North	....	....	4.75	....	....	....	5.5	7,280.3	2.65	....	31.50	741	.5	836	....	....	....	174	....	33	....	....	8 R 11	58	20
Cochrane South	427	....	16.75	.6	....	.6	48.35	1,456	.6	1,650	6.10	9,074.25	....	20	....	4,675	10.44	44	....	4	....	10	....	....	....
Fort William and Port Arthur	172.5	6	62.85	8.96	....	6.24	38.88	5,859.5	11.94	12,542	....	1,321,173	....	....	....	190	....	4,697.5	....	182	3	10	2 R 3	492.5	12,958.5
Hastings East and Hastings West	....	.5	21.5	.5	....	1.25	111.12	474	8.25	....	160.75	....	8.25	....	8	....	47.5	535	60	108	2	14	2 R 12	332	236
Kenora	....	1.22	11.12	.75	....	.62	36	3,131.5	.5	84	27.25	3,646	10.37	2,834	....	....	....	16	....	73	2	10	....	280	1,332
Lennox and Addington; Frontenac and Leeds.	....	2.5	98.52	....	....	....	48.90	2,596	....	....	190.01	....	.3	....	....	....	....	989.60	696	177	....	2	12 R 14	924	633
Muskoka and Haliburton and Ontario County	551	24.44	189.89	11.41	....	54.55	161.75	7,930.5	10.26	....	282.52	....	10.67	....	....	....	144.53	4,797.5	429	491	81	87	13 R 20	8,415	23,167
Nipissing	....	1.21	78.67	3.05	.15	3.12	102.48	7,984	15.87	....	284.97	....	10.02	....	....	....	.5	1,194.5	260	245	10	7	20 R 25	764	1,434
Parry Sound	....	2.45	145.88	3.82	....	2.79	139.67	5,219.1	4.48	....	231.2	....	13.7	....	....	34,520.25	....	4,629.25	1,730	405	60	21	1 R 18	2,411	11,714
Peterborough and Victoria	....	....	28.25	.1	....	33.5	51.3	1,152	34.5	....	139.06	....	8.25	....	....	....	13.25	632.5	412	63	15	13	....	546	353
Rainy River	93	3.60	83.73	1.10	.05	3.27	12.13	21,083	7.01	2,794.5	207.43	17,746.5	3.13	615	....	170	.60	6,236	....	85	2	4	10 R 10	28	656
Renfrew North, Renfrew South and Lanark	....	....	37.23	....	....	.12	65.70	330.1	.5	....	76.95	....	....	....	....	....	....	2,286	....	61	14	10	3 R 12	209	412
Simcoe Centre and East	....	....	75	....	....	1	16	3,240	....	....	62	....	.66	....	....	....	14.08	11,270	256	....	15	71	....	365	2,235
Sudbury	....	....	27.25	1.5	2.82	3.02	623.09	24,692.75	1.83	1,647	99.31	15,513	3.95	3,055	1,076.25	889	.07	44.5	....	68	3	7	11 R 13	53.5	592
Temiskaming	....	4.25	53.03	1.5	....	12.50	137.58	11,502	28.83	3,760.5	269.21	20,209	2.33	1,681	....	4,956	144.75	538	224	45	3	28	8 R 11	165	2,475
TOTALS	1,243.5	48.37	990.28	36.28	3.02	129.17	2,005.43	112,571.85	163.77	25,851.5	2,416.81	1,420,597.75	86.78	11,533.75	1,084.25	45,400.25	382.97	39,480.60	4,569	2,146	265	304	73 N 103 R	16,038.25	60,623.5

GREEMENTS

CRUSHED ROCK			Dragging Miles	Guard Rail Erected	CULVERTS			BRIDGES	EXCAVATION	
No. of Cu. Yds. Crushed	No. of Cu. Yds. Hauled	Length of Road Covered Miles		Length Feet	Wood	Stone or Concrete	Metal	No.	Rock Cu. Yds.	All other Materials Cu. Yds.
....	....	7.25	1,396.25	502	106	55	10	13 R 27	995.25	2,406
....	....	....	174	......	33	......	......	8 R 11	58	20
....	4,675	10.44	44	......	4	......	10	....	....	....
....	190	....	4,697.5	......	182	3	10	2 R 3	492.5	12,958.5
8	....	47.5	535	60	108	2	14	2 R 12	332	236
....	....	....	16	......	73	2	10	....	280	1,332
....	....	....	989.60	696	177	......	2	12 R 14	924	633
....	....	144.53	4,797.5	429	491	81	87	13 R 20	8,415	23,167
....	....	5	1,194.5	260	245	10	7	20 R 25	764	1,434
....	34,520.25	....	4,629.25	1,730	405	60	21	1 R 18	2,411	11,714
....	....	13.25	632.5	412	63	15	13	....	546	353
....	170	.60	6,236	......	85	2	4	10 R 10	28	656
....	....	....	2,286	......	61	14	10	3 R 12	209	412
....	....	14.08	11,270	256	......	15	71	....	365	2,235
1,076.25	889	.07	44.5	......	68	3	7	11 R 13	53.5	592
....	4,956	144.75	538	224	45	3	28	8 R 11	165	2,475
1,084.25	45,400.25	382.97	39,480.60	4,569	2,146	265	304	73 N 103 R	16,038.25	60,623.5

Report of the Motor Vehicles Branch, 1937

To The Honourable T. B. McQuesten,
Minister of Highways.

Sir:

I have the honour to submit herewith the annual report of the Motor Vehicles Branch for the year 1937.

Appended are the following:—

(a) A detailed statement of the motor vehicle permits and drivers' licenses issued for the calendar year 1937.

(b) A statement, duly certified by the Provincial Auditor, showing the revenue derived from all sources during the fiscal year ending March 31st, 1938.

(c) Reports detailing the activities of the Financial Responsibility and Accident Recording Divisions of the Branch.

The figures for the year show amazing increases in almost every Division. This is regrettably true of the number of accidents and deaths reported, as well as in the case of registrations. Revenue alone, of all the figures considered, showed a decrease due to the reduction of fees for 1938 permits. This reduction, however, was less than might have been expected, the reduction in fees being offset by the increased registrations.

Motor Vehicle Registrations

The record registration figures compiled last year were surpassed in every classification. Total registrations were up almost 40,000; there were 27,000 more passenger cars, 5,000 more trucks and 4,000 more trailers. Among passenger cars there was a decline in the number of 4 cylinder vehicles, and an increase of 6 and 8 cylinder types. The total registrations by classes were as follows:

Passenger Cars	541,802
Commercial Vehicles	75,687
Convertible Vehicles	1,847
Trailers	31,771
Motorcycles	4,582

Drivers' Licenses

Drivers license totals kept pace with increased vehicle registrations, maintaining almost exactly the same ratio as in 1936. For the first time the total number of licenses exceeded 900,000. There were 97,286 instruction permits issued, while 574,300 persons qualified for operators' licenses and 228,465 procured chauffeurs' licenses.

Revenue

Despite reduced fees, revenue totals were bolstered by increased registrations, with the result that the amount transmitted to the Provincial Treasurer was only slightly below the 1935 total, though over $2,000,000 less than in 1936. Gross receipts totalled $9,007,398.20, which after deductions for commissions, etc., provided a net revenue of $8,767,689.24.

Public Vehicles and Public Commercial Vehicles

Public Vehicle and Public Commercial Vehicle registrations mounted in keeping with other totals, and revenue from these sources was also higher. There were 754 Public Vehicles licensed, an increase of 59; while Public Commercial licenses reached a total of 6,881, an increase of 650, or more than 10%. Gross revenue amounted to $423,552.98, of which $141,444.51 was Public Vehicle fees and $282,108.47 was Public Commercial Vehicle fees.

Financial Responsibility Division

In former reports it has been pointed out that the value of the work of this Division is cumulative and is only now reaching its full efficiency. The figures for the year 1937 show that there are now almost 300,000 drivers' records available, while the total number of suspensions made effective during the year was approximately 70 per cent. higher than in 1935. The detailed report of activities of this Division reveals that 6,391 suspension orders were issued during the calendar year and at December 31st there were 9,311 suspensions in effect.

Accident Recording Division

The motor vehicle accident problem continues to be one of the greatest difficulties faced by this Branch. The year 1937 saw a tragic toll recorded, with the numbers of accidents and victims reaching a new high: a result which might perhaps have been foreseen in view of the heavy increases in traffic volume. To meet the alarming situation, an advertising campaign using a "horror" or "fear" approach was employed with gratifying results indicated during the last few months of the year. The very complete review of the accidents reported, which is submitted herewith, shows that 766 persons were killed, 12,092 injured and property estimated at $1,712,467.00 damaged in 13,906 accidents.

Royal Commission on Highway Transportation

The appointment of this commission resulted in a very great strain on the facilities of the Branch during the last three months of the year to meet the demands of the Commissioners and interested parties for information on which to base findings or briefs. In many cases there was a demand for a breakdown of figures which could be produced only by a complete review of statistics. Coming at a time when the staff of the Branch was engaged in preparation for the annual rush coincident with the issuance of permits for the ensuing year, almost all divisions of the Branch suffered considerable inconvenience. In most instances, however, the requirements of the commission were met punctually.

All of which is respectfully submitted.

J. P. Bickell,
Registrar Motor Vehicles.

COMPILED BY MOTOR VEHICLES BRANCH — DEPARTMENT OF HIGHWAYS
1937 STATISTICS
MOTOR VEHICLE REGISTRATIONS

Automobile Permits	541,802
Commercial Permits	75,687
Convertible Permits	1,847
Trailer Permits	31,771
Motorcycle Permits	4,582
Automobile Dealer's Permits	1,332
Motorcycle Dealer's Permits	16
Operators	573,538
Instruction Permits	97,286
Motorcycle Operators	762
Chauffeurs	228,465
In Transits	23,544
Transfers	113,143
Public Vehicles	754
Public Commercial Vehicles	6,881

PASSENGER CARS
Cylinders and Horsepower

Four Cylinders	170,424
Six Cylinders under 28 Horsepower	263,176
Six Cylinders over 28 Horsepower	31,206
Eight Cylinders under 35 Horsepower	70,071
Eight Cylinders over 35 Horsepower	5,693
Twelve Cylinders	492
Sixteen Cylinders	35
Electric	2
Steam	2
Free	701
	541,802

Registrations

Originals	58,509
Renewals	483,293
	541,802

Convertible Permits

Four Cylinders	1,189
Six Cylinders under 28 Horsepower	580
Six Cylinders over 28 Horsepower	21
Eight Cylinders under 35 Horsepower	49
Eight Cylinders over 35 Horsepower	2
Ontario Government Dominion Government	6
	1,847

COMMERCIAL CARS REGISTERED

Tires

Pneumatic	72,234
Solid and Deisel	220
Municipal	2,325
Ontario Government Dominion Government	908
	75,687

Gross Weight

	Pneumatic Tires	Solid Tires
Less than two tons	29,608	7
Of two tons and up to three tons	15,277	17
More than three tons and up to four tons	8,321	7
More than four tons and up to five tons	5,870	8
More than five tons and up to six tons	3,509	6
More than six tons and up to seven tons	3,273	16
More than seven tons and up to eight tons	3,449	51
More than eight tons and up to nine tons	1,219	23
More than nine tons and up to ten tons	1,484	60
More than ten tons and up to eleven tons	91	3
More than eleven tons and up to twelve tons	88	12
More than twelve tons and up to thirteen tons	7	2
More than thirteen tons and up to fourteen tons	10	..
More than fourteen tons and up to fifteen tons	28	8
	72,234	220
Municipal	2,325	
Ontario Government Dominion Government	908	75,467
		75,687

Registrations

Originals	11,239
Renewals	64,448
	75,687

Trailer Gross Weight

Of one ton or less	27,871
More than one ton and up to two tons	995
More than two tons and up to three tons	238
More than three tons and up to four tons	174
More than four tons and up to five tons	269
More than five tons and up to six tons	367
More than six tons and up to seven tons	465
More than seven tons and up to eight tons	851
More than eight tons and up to nine tons	21
More than nine tons and up to ten tons	102
More than ten tons and up to eleven tons	...
More than eleven tons and up to twelve tons	...
More than twelve tons and up to thirteen tons	...
More than thirteen tons and up to fourteen tons	...
More than fourteen tons and up to fifteen tons	14
Municipal	314
Free	90
	31,771

REGISTRATIONS—*Continued*

CITIES ONLY	Pass. Cars	Comms.	Convs.	Trlrs.	Motor-cycles	"M" Dlrs.
Belleville	2,435	463	16	128	17	14
Brantford	4,827	794	12	225	37	20
Chatham	3,377	702	13	214	22	14
Fort William	2,791	505	....	112	29	9
Galt	2,280	318	9	69	20	6
Guelph	3,143	532	10	112	21	19
Hamilton	23,264	3,421	40	939	191	62
Kingston	3,872	652	14	164	61	24
Kitchener	4,971	768	15	178	76	14
London	12,849	1,750	28	546	127	31
Niagara Falls	4,116	578	13	161	24	9
North Bay	2,076	356	1	51	17	6
Oshawa	5,258	495	10	310	45	27
Ottawa	18,651	2,404	24	478	202	64
Owen Sound	1,928	286	13	81	14	5
Peterborough	3,666	641	21	168	53	16
Port Arthur	2,754	454	16	58	23	6
St. Catharines	4,958	1,076	7	211	42	16
St. Thomas	2,728	356	11	107	27	8
Sarnia	3,272	460	8	135	20	9
Sault Ste. Marie	2,988	430	....	128	27	10
Stratford	2,628	345	15	131	35	9
Sudbury	3,999	650	....	63	42	19
Toronto	117,998	17,715	147	4,157	1,322	302
Welland	2,133	346	9	66	33	7
Windsor	14,987	1,843	22	539	88	66
Woodstock	1,982	346	13	84	18	9
Totals	259,931	38,686	487	9,615	2,633	801

REGISTRATIONS—*Continued*

CITIES AND COUNTIES	Pass. Cars	Comms.	Convs.	Trlrs.	Motor-cycle	"M" Dlrs.
Algoma	5,735	972	....	184	58	10
Brant	8,251	1,227	42	603	63	25
Bruce	7,983	688	7	684	22	11
Carleton	24,296	3,236	62	960	255	76
Dufferin	2,869	275	6	172	9	7
Dundas	2,817	263	7	173	24	11
Durham	4,627	497	51	295	29	9
Elgin	8,156	1,021	73	829	86	11
Essex	24,015	3,553	36	1,788	140	77
Frontenac	6,750	1,100	60	270	69	27
Glengarry	2,157	266	9	100	11	4
Grenville	2,715	379	28	128	14	8
Grey	8,891	886	50	522	39	14
Haldimand	4,813	562	7	483	22	15
Haliburton	737	96	3	37	2	1
Halton	5,360	865	24	366	55	8
Hastings	9,802	1,403	48	594	54	33
Huron	8,127	760	10	818	48	12
Kenora	1,858	647	....	62	17	9
Kent	13,688	1,854	28	1,441	51	31
Lambton	10,253	1,053	27	1,172	42	18
Lanark	5,131	585	55	294	24	17
Leeds	5,493	949	38	253	31	17
Lennox and Addington	3,170	439	5	272	14	7
Lincoln	9,812	2,055	62	590	84	19
Middlesex	22,084	2,607	71	1,485	164	36
Muskoka	2,917	561	9	145	34	10
Nipissing	5,137	770	3	113	56	9
Norfolk	6,373	946	34	736	43	11
Northumberland	4,885	705	29	363	46	5
Ontario	11,119	1,164	30	659	79	36
Oxford	10,240	1,352	80	1,060	78	28
Parry Sound	2,711	554	5	110	18	9
Peel	5,666	968	14	472	44	9
Perth	8,999	943	40	964	59	20
Peterborough	6,790	911	60	392	64	16
Prescott	1,965	274	10	112	22	12
Prince Edward	2,948	438	13	320	19	5
Rainy River	1,566	413	....	138	3	6
Renfrew	6,177	651	14	371	32	24
Russell	2,024	309	10	76	9	4
Simcoe	12,328	1,546	90	801	83	29
Stormont	4,532	578	21	226	79	15
Sudbury	7,437	1,018	1	153	44	21
Thunder Bay	7,039	1,456	20	206	71	19
Timiskaming	11,310	1,267	23	349	125	39
Victoria	4,713	541	36	323	15	14
Waterloo	14,835	1,748	66	918	172	26
Welland	13,987	2,014	90	674	134	26
Wellington	9,734	1,090	47	733	60	26
Wentworth	28,975	4,481	69	1,381	237	67
York	137,535	20,751	223	5,280	1,529	333
Miscellaneous	270	....	1	121	....	....
Totals	541,802	75,687	1,847	31,771	4,582	1,332

MOTOR VEHICLE REGISTRATIONS FOR THE YEARS 1904-1937, INCLUSIVE

Year	Passenger Cars	Owned in Ontario	Others	Commercial Vehicles	Two-Purpose Vehicles	Motorcycles	Trailers	Public Vehicles		Public Commercial Vehicles	
								Oper.	Licenses	Oper.	Licenses
1904	535	......	......	......	......	......	......	......	......	......	......
1905	553	......	......	......	......	......	......	......	......	......	......
1906	1,176	517	659	......	......	......	......	......	......	......	......
1907	1,530	550	980	......	......	......	......	......	......	......	......
1908	1,754	589	1,165	......	......	......	......	......	......	......	......
1909	2,452	1,020	1,432	......	......	......	......	......	......	......	......
1910	4,230	1,977	2,253	......	......	......	......	......	......	......	......
1911	11,339	7,338	4,001	......	......	......	......	......	......	......	......
1912	16,268	11,939	4,327	......	......	1,754	......	......	......	......	......
1913	23,700	17,750	5,950	......	......	2,900	......	......	......	......	......
1914	31,724	25,308	6,415	......	......	3,633	......	......	......	......	......
1915	42,346	36,661	5,686	......	......	4,174	......	......	......	......	......
1916	51,589	50,587	1,002	2,786	......	4,287	......	......	......	......	......
1917	78,861	78,475	386	4,929	......	5,180	......	......	......	......	......
1918	101,845	101,599	246	7,529	......	5,002	......	......	......	......	......
1919	127,860	127,512	348	11,428	......	5,516	......	......	......	......	......
1920	155,861	155,519	342	16,204	......	5,496	......	......	......	......	......
1921	181,978	181,686	292	19,554	......	4,989	327	......	......	......	......
1922	210,333	210,008	325	24,164	......	4,799	463	......	......	......	......
1923	245,815	245,435	380	28,612	......	4,325	591	......	......	......	......
1924	271,341	270,876	465	31,488	......	3,941	778	50	102	......	......
1925	303,736	303,216	520	34,690	......	3,748	1,058	91	216	......	......
1926	343,992	343,586	406	39,012	......	3,345	1,398	107	384	......	......
1927	386,903	386,311	592	43,442	......	3,159	1,962	103	480	......	......
1928	429,426	428,890	536	54,714	......	3,197	3,281	104	522	367	945
1929	473,222	472,634	588	55,218	8,226	3,541	4,903	80	587	285	1,118
1930	490,906	490,270	636	61,690	5,986	3,924	7,111	95	643	372	1,155
1931	489,713	489,067	646	64,256	4,177	4,070	9,996	90	629	1,977	3,900
1932	462,923	462,598	325	61,347	3,239	4,088	12,998	100	590	1,938	3,397
1933	453,314	452,961	353	59,760	2,909	4,370	16,311	85	494	2,239	4,235
1934	470,617	470,239	378	64,436	2,724	4,468	19,871	85	513	1,942	4,086
1935	489,610	489,164	446	67,590	2,370	4,506	24,232	102	597	2,218	4,834
1936	514,211	513,952	259	70,693	......	4,553	27,930	118	695	2,987	6,231
1937	541,802	541,532	270	75,687	1,847	4,582	31,771	110	754	3,186	6,881

MOTOR VEHICLES BRANCH

Department of Highways

Revenue for Fiscal Year 1937-1938

		Gross	Deductions	Net
Passenger Car Permits		$ 4,293,833.00	$ 106,148.75	$ 4,187,684.25
Commercial Permits		2,710,270.25	18,047.93	2,692,222.32
Dealers' Permits		26,182.00	....	26,182.00
Motorcycle Dealers' Permits		49.00	....	49.00
Trailer Permits		239,725.00	6,608.05	233,116.95
Two Purpose Permits		9,500.00	311.40	9,188.60
Chauffeurs		278,706.00	21,626.80	257,079.20
Operators and Instruction		670,544.50	62,807.90	607,736.60
Motorcycle Permits		9,743.50	558.40	9,185.10
Transfers		213,808.00	16,778.50	197,029.50
Duplicate Cards		8,807.00	2.50	8,804.50
In Transits		10,707.50	909.35	9,798.15
Certificates and Searches		1,409.08	....	1,409.08
Fines		91,988.23	165.00	91,823.23
Lists		775.28	....	775.28
Public Vehicles		141,444.51	....	141,444.51
Public Commercial Vehicles		282,108.47	5,638.97	276,469.50
Postage		82.02	.03	81.99
Testing Safety Glass		100.00	....	100.00
Testing Safety Signals		30.00	....	30.00
Examination Fees		17,511.00	25.00	17,486.00
Miscellaneous		73.86	....	73.86
		$ 9,007,398.20	$ 239,628.58	$ 8,767,769.62
Balances due from Agents		$ 137.60		
Less amount overcharged on Commercials.		37.80	175.40	
		$ 9,007,398.20	$ 239,803.98	$ 8,767,594.22
Bank Interest	$ 8.22			
1936–1937 Balances Paid	86.60			
Adjustment on Previous Balances	.20			95.02
				$ 8,767,689.24

MOTOR VEHICLES BRANCH

Department of Highways

Revenue for Fiscal Year 1937-1938

Passenger Car Permits		$ 4,293,833.00		
Commercial Permits		2,710,270.25		
Dealers Permits		26,182.00		
Motorcycle Dealers' Permits		49.00		
Trailer Permits		239,725.00		
Two Purpose Permits		9,500.00		
Chauffeurs		278,706.00		
Operators and Instruction		670,544.50		
Motorcycle Permits		9,743.50		
Transfers		213,808.00		
Duplicate Cards		8,807.00		
In Transits		10,707.50		
Certificates and Searches		1,409.08		
Fines		91,988.23		
Lists		775.28		
Public Vehicles		141,444.51		
Public Commercial Vehicles		282,108.47		
Postage		82.02		
Testing Safety Glass		100.00		
Testing Safety Signals		30.00		
Examination Fees		17,511.00		
Miscellaneous		73.86		
			$ 9,007,398.20	
Less: —				
Commissions deducted by Agents		$ 227,967.25		
Refunds deducted by Provincial Treasurer		6,528.33		
Balances due from Agents		137.60		
Amount overcharged on Commercials		37.80		
Journal entry re Ontario Municipal Board fees		5,128.97		
Cheque charged back as N. S. F., Alberta Motor Sales (Transfers, $4.00; Postage, .03)		4.03	239,803.98	$ 8,767,594.22
Bank Interest	$8.22			
1936-1937 Balances paid	86.60			
Adjustment on previous balance	.20			
				95.02
				$ 8,767,689.24

MOTOR VEHICLES BRANCH

Department of Highways

Itemized Statement of Receipts for Fiscal Year 1937-1938

PASSENGER CARS: —

	(1937 Fees)		
35,524 at	$ 7.00 (4 cyl.)	$ 248,668.00	
1,188 at	3.50 (half fee)	4,158.00	
51,226 at	12.00 (6 cyl.)	614,712.00	
1,402 at	6.00 (half fee)	8,412.00	
13,084 at	15.00	196,260.00	
592 at	7.50 (half fee)	4,440.00	
13,911 at	15.00 (8 cyl.)	208,665.00	
531 at	7.50 (half fee)	3,982.50	
1,343 at	20.00	26,860.00	
83 at	10.00 (half fee)	830.00	
117 at	30.00 (12 cyl.)	3,510.00	
9 at	15.00 (half fee)	135.00	
8 at	40.00 (16 cyl.)	320.00	
1 at	20.00 (electric)	20.00	
1 at	10.00 (half fee, steam)	10.00	
2,675 at	2.00 (new sets)	5,350.00	
5,282 at	No Fee (new sets)	....	
649 at	Free	....	
	(1938 Fees)		
137,783 at	2.00 (4 cyl.)	275,566.00	
227,959 at	7.00 (6 cyl.)	1,595,713.00	
32,301 at	10.00	323,010.00	
68,171 at	10.00 (8 cyl.)	681,710.00	
5,066 at	15.00	75,990.00	
539 at	25.00 (12 cyl.)	13,475.00	
24 at	35.00 (16 cyl.)	840.00	
2 at	15.00 (electric)	30.00	
1 at	15.00 (steam)	15.00	
938 at	1.00 (new sets)	938.00	
(600,410)	Balance of Fees	213.50	
			$ 4,293,833.00

COMMERCIALS: —

Pneumatic Tires

	(1937 Fees)		
7,568 at	10.00	75,680.00	
559 at	5.00 (half fee)	2,795.00	
3,253 at	24.00	78,072.00	
383 at	12.00 (half fee)	4,596.00	
1 at	6.00 (quarter fee)	6.00	
1,720 at	48.00	82,560.00	
172 at	24.00 (half fee)	4,128.00	
1,232 at	65.00	80,080.00	
132 at	32.50 (half fee)	4,290.00	
626 at	84.00	52,584.00	
87 at	42.00 (half fee)	3,654.00	
1 at	21.00 (quarter fee)	21.00	
552 at	98.00	54,096.00	
104 at	49.00 (half fee)	5,096.00	
685 at	112.00	76,720.00	
81 at	56.00 (half fee)	4,536.00	
224 at	144.00	32,256.00	
38 at	72.00 (half fee)	2,736.00	
255 at	170.00	43,350.00	
22 at	85.00 (half fee)	1,870.00	
2 at	198.00	396.00	
9 at	228.00	2,052.00	
1 at	260.00	260.00	
1 at	294.00	294.00	
4 at	330.00	1,320.00	
1 at	165.00 (half fee)	165.00	

Solid Tires, Etc.

5 at	16.00	80.00
4 at	33.00	132.00
1 at	16.50 (half fee)	16.50
2 at	80.00	160.00
1 at	102.00	102.00
2 at	119.00	238.00
3 at	136.00	408.00
1 at	68.00 (half fee)	68.00
3 at	171.00	513.00
2 at	85.50 (half fee)	171.00
6 at	200.00	1,200 00
3 at	132.00 (half fee)	396.00
1 at	187.50 (half fee)	187.50
4 at	100.00 (special fee)	400.00
2,457 at	2.00 (Munic.)	4,914.00
991 at	2.00 (new sets)	1,982.00
274 at	No Fee (new sets)	....
852 at	Free	....

Pneumatic Tires

(1938 Fees)

24,212 at	7.50	181,590.00
12,286 at	18.00	221,148.00
6,839 at	36.00	246,204.00
5,225 at	48.50	253,412.50
3,355 at	63.00	211,365.00
2,891 at	73.50	212,488.50
3,297 at	84.00	276,948.00
1,287 at	108.00	138,996.00
1 355 at	127.50	172,762.50
8 at	148.50	1,188.00
31 at	171.00	5,301.00
9 at	195.00	1,755.00
8 at	220.50	1,764.00
27 at	247.50	6,682.50
1 at	75.00 (special fee)	75.00

Solid Tires

5 at	12.00	60.00
14 at	24.50	343.00
8 at	45.00	360.00
5 at	60.00	300.00
7 at	76.50	535.50
6 at	89.00	534.00
17 at	102.00	1,734.00
4 at	128.00	512.00
46 at	150.00	6,900.00
5 at	198.00	990.00
1 at	99.00 (half fee)	99.00
3 at	224.00	672.00
9 at	281.00	2,529.00
254 at	1.00 (new sets)	254.00
Increase Capacity		68,792.75

BUSES: —

(1937 Fees)

1 at	5.00 (half fee)	5.00
1 at	24.00	24.00
1 at	12.00 (half fee)	12.00
10 at	36.00	360.00
1 at	18.00 (half fee)	18.00
10 at	55.00	550.00
1 at	27.50 (half fee)	27.50
6 at	72.00	432.00

1 at 36.00 (half fee)	36.00	
7 at 84.00	588.00	
8 at 42.00 (half fee)	336.00	
20 at 96.00	1,920.00	
3 at 48.00 (half fee)	144.00	
4 at 117.00	468.00	
7 at 58.50 (half fee)	409.50	
13 at 130.00	1,690.00	
9 at 165.00	1,485.00	
1 at 82.50 (half fee)	82.50	
15 at 180.00	2,700.00	
2 at 198.00	396.00	
4 at 2.00 (new sets)	8.00	
47 at No Fee (new sets)	....	
1 at Free	....	
Pneumatic Tires		
(1938 Fees)		
2 at 7.50	15.00	
20 at 18.00	360.00	
32 at 27.00	864.00	
75 at 41.00	3,075.00	
115 at 54.00	6,210.00	
141 at 63.00	8,883.00	
108 at 72.00	7,776.00	
28 at 87.50	2,450.00	
74 at 97.50	7,215.00	
67 at 123.50	8,274.50	
73 at 135.00	9,855.00	
Solid Tires, Etc.		
6 at 78.50	471.00	
2 at 90.00	180.00	
2 at 108.00	216.00	
4 at 120.00	480.00	
6 at 148.50	891.00	
3 at 162.00	486.00	
1 at 1.00 (new set)	1.00	
(84,472)		$ 2,710,270.25
"M" DEALERS:—		
(1937 Fees)		
71 at 25.00	1,775.00	
2 at 12.50	25.00	
31 at 2.00 (new sets)	62.00	
3 at No Fee (new sets)	....	
(1938 Fees)		
1,215 at 20.00	24,300.00	
20 at 1.00 (new sets)	20.00	
(1,342)		$ 26,182.00
"M. C." DEALERS:—		
(1937 Fees)		
3 at 6.00	$ 18.00	
1 at 1.00 (new set)	1.00	
(1938 Fees)		
10 at 3.00	30.00	
14		$ 49.00
TRAILERS:—		
(1937 Fees)		
13,383 at 3.00	40,149.00	
1,153 at 1.50 (half fee)	1,729.50	
406 at 10.00	4,060.00	

41 at	5.00 (half fee)	205.00	
51 at	21.00	1,071.00	
8 at	10.50 (half fee)	84.00	
29 at	32.00	928.00	
3 at	16.00 (half fee)	48.00	
23 at	50.00	1 150.00	
7 at	25.00 (half fee)	175.00	
54 at	66.00	3,564.00	
7 at	33.00 (half fee)	231.00	
53 at	77.00	4,081.00	
6 at	38.50 (half fee)	231.00	
90 at	88.00	7,920.00	
11 at	44.00 (half fee)	484.00	
3 at	108.00	324.00	
18 at	120.00	2,160.00	
6 at	210.00	1,260.00	
1 at	105.00 (half fee)	105.00	
223 at	2.00 (Munic.)	446.00	
135 at	1.00 (new sets)	135.00	
98 at	Free	....	
3 at	No Fee (new sets)	....	
	(1938 Fees)		
17,997 at	2.00	35,994.00	
613 at	7.50	4,597.50	
181 at	15.50	2,805.50	
112 at	24.00	2,688.00	
245 at	37.50	9,187.50	
299 at	49.50	14,800.50	
418 at	57.50	24,035.00	
903 at	66.00	59,598.00	
1 at	33.00 (half fee)	33.00	
20 at	81.00	1,620.00	
124 at	90.00	11,160.00	
9 at	157.50	1,417.50	
1 at	75.00 (special fee)	75.00	
33 at	.50 (new sets)	16.50	
	Increase Capacity	1,156.50	
(36,768)			$ 239,725.00
TWO PURPOSE:—			
	(1937 Fees)		
329 at	7.00 (4 cyl.)	2,303.00	
20 at	3.50 (half fee)	70.00	
91 at	12.00 (6 cyl.)	1,092.00	
3 at	6.00 (half fee)	18.00	
5 at	15.00	75.00	
2 at	7.50 (half fee)	15.00	
12 at	15.00 (8 cyl.)	180.00	
1 at	20.00	20.00	
63 at	2.00 (new sets)	126.00	
6 at	Free	....	
7 at	No Fee (new sets)	....	
	(1938 Fees)		
955 at	2.00 (4 cyl.)	1,910.00	
423 at	7.00 (6 cyl.)	2,961.00	
7 at	10.00	70.00	
57 at	10.00 (8 cyl.)	570.00	
4 at	15.00	60.00	
21 at	1.00 (new sets)	21.00	
(2,006)	Balance of Fees	9.00	
			$ 9,500.00

Chauffeurs: —			
25,801 at	2.00 (originals)	51,602.00	
1,989 at	1.00 (originals, half fee)	1,989.00	
223,403 at	1.00 (renewals)	223,403.00	
1 at Free	(originals)		
21 at Free	(renewals)		
(251,215)			
	Prev. Year Fees (1937)	355.00	
	“ “ “ (1936)	1,346.00	
	“ “ “ (1935)	11.00	
			$ 278,706.00
Operators: —			
614,351 at	1.00 (operators)	614,351.00	
104,495 at	.50 (instruction)	52,247.50	
802 at	1.00 (M. C. oper.)	802.00	
6 at Free	(oper.)		
(719,654)			
	Prev. Year Fees Oper. (1937)	824.00	
	“ “ “ “ (1936)	2,301.00	
	“ “ “ “ (1935)	12.00	
	“ “ “ M.C.Op. (1937)	4.00	
	“ “ “ “ (1936)	3.00	
			$ 670,544.50
Motorcycles: —			
	(1937 Fees)		
2,267 at	3.00	6,801.00	
82 at	1.50 (half fee)	123.00	
10 at	1.00 (new sets)	10.00	
25 at	2.00 (Munic.)	50.00	
41 at Free			
3 at No Fee	(new sets)		
	(1938 Fees)		
2,759 at	1.00	2,759.00	
1 at	.50 (new set)	.50	
(5,188)			$ 9,743.50
Transfers: —			
	(1937 Fees)		
88,286 at	2.00 (pass.)	176,572.00	
6,673 at	2.00 (comm.)	13,346.00	
710 at	1.00 (motorcycle)	710.00	
120 at	2.00 (two purpose)	240.00	
193 at	2.00 (trailers)	386.00	
5 at	2.00 (“M” dealers)	10.00	
	(1938 Fees)		
21,144 at	1.00 (pass.)	21,144.00	
1,307 at	1.00 (comm.)	1,307.00	
60 at	.50 (motorcycle)	30.00	
11 at	1.00 (two purpose)	11.00	
52 at	1.00 (trailers)	52.00	
(118,561)			$ 213,808.00
Duplicate Cards: —			
3,732 at	.50 (pass.)	$ 1,866.00	
698 at	.50 (commercial)	349.00	
42 at	.50 (motorcycles)	21.00	
9 at	.50 (two purpose)	4.50	
70 at	.50 (trailers)	35.00	
866 at	.50 (pass. transfers)	433.00	
98 at	.50 (comm. transfers)	49.00	
9 at	.50 (motorcycle transfers)	4.50	
2 at	.50 (two purpose transfers)	1.00	
2 at	.50 (trailer transfers)	1.00	
101 at	.50 (dealers’ pass. transfers)	50.50	

7 at	.50 (dealers' comm. transfers)	3.50	
2 at	.50 ("M" dealers)	1.00	
646 at	.50 (chauff. origls.)	323.00	
3,734 at	.50 (chauff. renls.)	1,867.00	
7,329 at	.50 (operators)	3,664.50	
1 at	.50 (instruction permits)	.50	
14 at	.50 (M. C. operators)	7.00	
(17,362)			
8 at	.50 (1935)	4.00	
244 at	.50 (1936)	122.00	
			$ 8,807.00

IN TRANSITS:—

21,415 at	.50	10,707.50	
			$ 10,707.50

SEARCHES AND CERTIFICATES:—

999 at	.25	249.75	
152 at	.50	76.00	
60 at	.75	45.00	
1 at	.80	.80	
231 at	1.00	231.00	
8 at	1.25	10.00	
7 at	1.50	10.50	
5 at	1.75	8.75	
56 at	2.00	112.00	
1 at	2.03	2.03	
3 at	2.25	6.75	
2 at	2.50	5.00	
3 at	2.75	8.25	
25 at	3.00	75.00	
12 at	4.00	48.00	
1 at	4.25	4.25	
5 at	5.00	25.00	
2 at	6.00	12.00	
2 at	7.00	14.00	
3 at	8.00	24.00	
3 at	9.00	27.00	
2 at	10.00	20.00	
4 at	11.00	44.00	
1 at	12.00	12.00	
1 at	13.00	13.00	
4 at	14.00	56.00	
2 at	15.00	30.00	
1 at	16.00	16.00	
2 at	17.00	34.00	
2 at	18.00	36.00	
1 at	23.00	23.00	
1 at	42.00	42.00	
1 at	88.00	88.00	
(1,603)			$ 1,409.08

MISCELLANEOUS	73.86
FINES	91,988.23
LISTS	775.28
PUBLIC VEHICLES	141,444.51
PUBLIC COMMERCIAL VEHICLES	282,108.47
POSTAGE	82.02
EXAMINATION FEES	17,511.00
TESTING SAFETY GLASS	100.00
TESTING SAFETY SIGNALS	30.00

COMMISSIONS PAID TO AGENTS:—

Passenger Cars	$ 104,250.75
Commercials	14,409.10
Trailers	6,433.05
Two Purpose	305.40
Chauffeurs	21,622.80
Operators and Instruction	62,788.40
Motorcycles	548.40

Transfers	16,740.50		
In Transits	868.85		
		$ 227,967.25	
REFUNDS:—			
Passenger Cars	1,898.00		
Commercials	3,638.83		
Trailers	175.00		
Two Purpose	6.00		
Chauffeurs	4.00		
Operators and Instruction	19.50		
Motorcycles	10.00		
Transfers	34.00		
Fines	165.00		
Public Comm. Vehicles	510.00		
Examination Fees	25.00		
Duplicate Cards	2.50		
In Transits	40.50		
		6,528.33	
Less amount overcharged on Commercials		37.80	
1937–1938 Balances due from Agents		137.60	
Journal entry re Ontario Municipal Board Fees		5,128.97	
Cheque charged back as N. S. F.: Alberta Motor Sales (Transfers, $4.00; Postage, .03)		4.03	
Deposited with Treasury as shown by Treasurer's Statement		8,767,689.24	
		$ 9,007,493.22	
Interest	$ 8.22		
1936–1937 Bals. Paid	86.60		
Adjustment on Previous Balance	.20		95.02
	$ 9,007,398.20		$ 9,007,398.20

ANNUAL REPORT OF THE FINANCIAL RESPONSIBILITY DIVISION FOR THE YEAR 1937

An increase in the number of motor vehicle accidents occurring on Ontario streets and highways led to a stiffening of the attitude of the courts during this year, and was reflected in a largely increased number of convictions with a corresponding increase in suspensions. Major increases under the various headings of suspension causes were recorded for reckless driving, and driving motor vehicles while intoxicated. The number of suspensions for reckless driving was 480 higher, while drunk driving cases were up 304. Also deserving of note was the increase in the number of suspensions for cancellation of proof of Financial Responsibility. While these cancellations were in part due to failure of the insured to pay premiums and similar defaults, the increase is largely indicative of a growing reluctance on the part of insurance companies to continue to furnish the necessary proof for those who have come under the provisions of Part XIII of the Highway Traffic Act, a reluctance apparently based on loss experience and seemingly verifying the belief that the financial responsibility legislation does serve to segregate and restrict persons most liable to be the cause of accidents.

From the time the legislation first became effective on September 1st, 1930, it has led to the issuance of 26,252 suspension orders by December 31st, 1937. During the same period, 16,941 of these orders had been rescinded either because the person affected had furnished proof of financial responsibility or had refrained from the operation of motor vehicles for at least three years. At the end of the year there were 9,311 suspensions still in effect.

Tables I and II appended hereto show the number of suspensions issued annually for various causes under the Financial Responsibility requirements.

There are, however, many other suspensions for various causes which do not require the filing of proof of financial responsibility. These are for the most part suspensions imposed by Magistrates following convictions in court and suspensions made effective by the Minister of Highways because of bad driving records, physical or mental disability and other causes. The suspensions of this nature were much more numerous than in previous years, showing an increase of almost 50% over the highest previous year. This increase is largely due to two causes: first, the stiffened attitude of the courts, and second, the increased employment of the power vested in the Minister to revoke the licenses of those whose records justify such action. That the use of these records for this purpose has increased is not an indication of laxity in the past but a verification of predictions made in previous reports that the value of these records would be cumulative and that they would become more useful from year to year. Almost three hundred thousand drivers' records are now available. As a file or record is not started until the person concerned has been involved in an accident, convicted of an offence or the object of a complaint, it will be seen that nearly one third of all drivers have acquired marks against their records in the past seven years.

Table number III shows the numbers of suspension orders issued annually for causes not necessitating the filing of proof of Financial Responsibility.

Table No. I.

FINANCIAL RESPONSIBILITY SUSPENSIONS

September 1, 1930, to December 31, 1937

Suspension	Total	1930 4 mos.	1931	1932	1933	1934	1935	1936	1937
Reckless driving	9,741	339	983	585	1,064	1,322	1,546	1,711	2,191
Speeding	346	6	19	15	37	44	64	84	77
Racing	11	4	3	1	1	..	..	2	..
Driving without license	4,615	323	1,199	926	1,306	147	231	212	271
Criminal negligence	245	9	34	29	36	32	25	26	54
Other offences	627	41	79	57	69	88	100	95	98
Policy cancellation	5,084	7	212	469	976	690	821	894	1,015
Unsatisfied judgment	516	..	48	66	90	46	73	82	111
Failing to remain at accident	1,358	92	186	72	182	175	155	232	264
Intoxication	3,709	186	554	324	345	420	532	522	826
Total	26,252	1,007	3,317	2,544	4,106	2,964	3,547	3,860	4,907

These suspensions all required the surrender or confiscation not only of drivers' licenses but also all motor vehicle permits and number plates registered in name of person suspended.

Table No. II.
FINANCIAL RESPONSIBILITY SUSPENSIONS RESCINDED
September 1, 1930, to December 31, 1937

Suspension	Total	1930 4 mos.	1931	1932	1933	1934	1935	1936	1937
Reckless driving	5,752	83	571	554	659	823	950	988	1,124
Speeding	252	3	10	14	29	36	42	55	63
Racing	11	..	3	4	2	..	..	2	..
Driving without license	4,105	38	336	413	509	2531	xx 99	xx 95	84
Criminal negligence	101	3	12	15	13	14	18	7	19
Other offences	157	3	16	16	19	21	35	27	20
Policy cancellation	2,901	3	100	405	518	523	xx 496	xx 447	409
Unsatisfied judgment	149	..	2	14	26	22	20	35	30
Failing to remain at accident	815	18	107	101	125	107	103	116	138
Intoxication	1,259	10	195	184	149	186	183	165	187
Expiry	1,439	..	..	..	1	108	365	480	485
Total	16,941	161	1,352	1,720	2,050	4,371	2,311	2,417	2,559

xx Suspensions lifted during years 1934 and 1935 included 2,584 cancelled under the provisions of an amendment to Section 72 of the Highway Traffic Act with respect to the offence of driving without a license.

x Relieved pursuant to the provisions of Section 86 of the Highway Traffic Act. Not classified according to offence.

Table No. III.
NON-FINANCIAL RESPONSIBILITY SUSPENSIONS
September 1, 1930, to December 31, 1937

Suspension	Total	1930 4 mos.	1931	1932	1933	1934	1935	1936	1937
Reckless driving	5,119	311	895	577	414	439	701	768	1,014
Speeding	308	13	30	25	33	21	71	73	42
Racing x	4	1	3	..	..	..	..	..	..
Driving without license	27	..	2	..	..	2	7	6	10
Criminal negligence	5	..	1	1	1	..	1	..	1
Other offences	977	13	39	34	41	30	232	202	{ 36 350
Unsatisfied judgment x	52	..	..	3	8	3	17	6	15
Failing to remain at accident x	25	5	4	1	1	..	5	8	1
Intoxication x	82	3	5	8	9	23	11	8	15
Total	6,599	346	979	649	507	518	1,045	1,071	1,484

x These offences all involve mandatory Financial Responsibility suspensions. They are classified as non-financial responsibility here since they applied to persons already under suspension under the financial responsibility provisions and are segregated in order that the figures in Table I. will show more accurately, the number of persons actually affected.

ANNUAL REPORT—ACCIDENT RECORDING DIVISION MOTOR VEHICLES BRANCH, FOR THE YEAR 1937

With the inauguration of the Accident Reporting Law in September, 1930, there was created a system of pooling province-wide information pertaining to motor vehicle accidents which has enabled the Motor Vehicles Branch to accumulate many facts necessary to a better understanding of a very complex problem.

As a prefix to the presentation of statistics relating to 1937 experience it is felt desirable to outline, briefly, the methods of collecting the data and the uses to which they are put.

Under the provisions of Section 94 of the Highway Traffic Act, a driver who is directly or indirectly involved in a motor vehicle accident resulting in personal injury or in property damage in excess of $50.00, is required to report the accident to the nearest municipal or provincial police officer. The police, in turn, are required to report the mishap to the Motor Vehicles Branch.

Since this law became effective, 75,409 accidents, in which 4,076 persons were killed and 68,131 injured, have been reported. Each of these reports has been entered as part of the driving record of the driver or drivers involved; a location index of all mishaps has been maintained; and the massed statistics have been compiled with a view to their use and value in safety education, highway policing, highway construction and legislation enactment — the methods of approach which must be combined in any planned programme of accident prevention.

While the use of massed statistics is designed to overcome the distorted perspective which would result if one were to draw conclusions from the occasional accident which is witnessed or from somewhat sensational newspaper reports which are more concerned with results than with causes, such data are nevertheless subject to definite limitations, since certain circumstances may be common to a large group of accidents yet the causes or contributing causes of the individual accidents comprising the group may differ one from the other. Failure to keep this in mind frequently results in sweeping conclusions being drawn without proper justification, as is the case, for example, when the age or condition of the driver, pedestrian or vehicle is accepted as a measurement of accident cause. Actually, the primary cause is seldom known and those detailed to investigate accidents find considerable difficulty in determining the relative importance of the various contributory causes noted in any individual accident. Regardless of the difficulties of measurement, however, it is possible to isolate the dangerous or improper actions of drivers and pedestrians which, in various combinations, lead to accidents. This information which is given in a later section of this report, should serve as a useful guide to every individual road-user as well as to educational or enforcement agencies directly interested in accident prevention.

In giving attention to the difficulties met in ascertaining accident causes it is necessary to emphasize that these difficulties shrink to insignificance when we revert to the more important problem of applying the remedies.

While it would appear that the accident situation would be greatly improved if there were a general acceptance of the knowledge embodied in the well-known slogan, 'Care, Courtesy and Common Sense,' safety plans which depend upon the voluntary co-operation of motorists and pedestrians to improve their traffic behaviour are not sufficient. In reality, therefore, we are faced with an economic and humanitarian problem which will only be corrected by a safety programme applied and sustained over a long period. Such a programme must include: the modernization of streets and highways — an essential but costly, long-term project. Second, the training of adults and young people on the proper conduct necessary to insure maximum safety while driving or on foot. The magnitude of the problem of education becomes apparent when we realize that every individual citizen — whether child or adult — must be reached, his interest aroused and sustained. Finally, there must be a law enforcement programme directed against those who, because of a failure to recognize their responsibilities of their own accord, endanger themselves and others.

In the final analysis, the human element is the paramount factor in the accident problem and the results to be effected by the application of the three 'E's' of safety — Engineering, Education and Enforcement — will depend upon the degree of co-operation given by all citizens. The acceptance of individual responsibility to observe the rules of safe driving and to organize and to support all worthy efforts to promote safer traffic conditions is the primary necessity to reduce the number and seriousness of accidents.

Significant features of the 1937 Statistical Summary (shown on next page) may be summed up as follows:

Number of Accidents Reported (See Summary, Section 1):

Reported motor vehicle accidents (involving personal injury or property damage in excess of $50.00) totalled 13,906 during 1937, and resulted in 766 deaths, injury to 12,092 persons and a direct damage loss, to vehicles and other property, amounting to $1,712,467.00.

F9.
2M-Feb. 1936

PROVINCE OF ONTARIO
MOTOR VEHICLES BRANCH

SUMMARY OF MOTOR VEHICLE ACCIDENT STATISTICS

ONTARIO DURING YEAR 1937.

1. TYPE OF ACCIDENT

TYPE OF ACCIDENT	NUMBER OF ACCIDENTS				NUMBER OF PERSONS KILLED											NUMBER OF PERSONS INJURED										
	Total	Fatal	Personal Injury	Property Damage only	Previous Year's Total All Ages	Total All Ages	0-4	5-14	15-35	36-54	55-64	65 and Over	Not Stated	Male	Female	Previous Year's T'tl. All Ages	Total All Ages	0-4	5-14	15-35	36-54	55-64	65 and Over	Not Stated	Male	Female
1. Collision with pedestrian	3749	297	3452		235	299	30	55	36	53	44	81		218	81	3307	3617	466	1193	581	594	296	329	158	2286	1331
2. Collision with other automobile	5782	130	2627	3025	95	160	2	8	68	40	25	17		103	57	3561	4578	94	275	2121	1257	355	205	271	2514	2064
3. Collision with horse drawn vehicle	193	12	118	63	7	12		2		3	5	2		11	1	175	170	1	8	78	44	18	20	6	139	31
4. Collision with R. R. train	154	38	67	49	40	65	4	2	25	21	9	4		45	20	136	126	1	4	72	24	11	4	10	92	34
5. Collision with street car	196	12	82	102	14	13		1	8		4			8	5	143	139	2	8	74	34	6	5	10	94	45
6. Collision with other vehicles	22		13	9												10	22	2		5	8	2	2	3	18	4
7. Collision with fixed object	1269	59	643	567	43	70		3	42	12	7	6		53	17	865	1044	10	39	583	264	64	42	42	691	353
8. Collision with bicycle	1285	59	1225	1	30	60		13	26	11	8	2		59	1	1124	1261	1	307	675	172	38	14	54	1171	90
9. Collision with motorcycle	207	11	186	10	8	11		1	9	1				10	1	183	220		1	187	20			12	205	15
10. Non-collision accident	875	61	483	331	67	69	1	2	32	21	7	6		45	24	719	849	7	19	454	238	56	36	39	503	346
11. Miscellaneous	174	7	55	112	7	7	2		2	3				7		28	66	2	5	35	18	2	1	3	45	21
TOTALS	13906	686	8951	4269	546	766	39	87	248	165	109	118		559	207	10251	12092	586	1854	4865	2673	848	658	608	7758	4334

2. HOUR OF OCCURRENCE

HOUR OF OCCURRENCE	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage Only
12 to 1 A.M.	568	27	341	200
1 to 2 A.M.	385	15	209	161
2 to 3 A.M.	232	10	107	115
3 to 4 A.M.	152	6	72	74
4 to 5 A.M.	110	8	50	52
5 to 6 A.M.	98	4	41	53
6 to 7 A.M.	136	8	78	50
7 to 8 A.M.	245	12	148	85
8 to 9 A.M.	385	14	249	122
9 to 10 A.M.	382	12	241	129
10 to 11 A.M.	489	18	294	177
11 to 12 A.M.	623	31	378	214
12 to 1 P.M.	594	24	418	152
1 to 2 P.M.	607	20	410	177
2 to 3 P.M.	670	33	422	215
3 to 4 P.M.	770	41	496	233
4 to 5 P.M.	962	57	637	268
5 to 6 P.M.	1203	56	845	302
6 to 7 P.M.	1016	54	701	261
7 to 8 P.M.	1036	40	735	261
8 to 9 P.M.	991	55	685	251
9 to 10 P.M.	758	57	473	228
10 to 11 P.M.	730	44	451	235
11 to 12 P.M.	701	37	429	235
Not stated	63	3	41	19
TOTALS	13906	686	8951	4269

3. DAY OF OCCURRENCE

DAY OF OCCURRENCE	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage Only
1. Sunday	2061	100	1267	694
2. Monday	1748	99	1125	524
3. Tuesday	1616	82	1056	478
4. Wednesday	1699	89	1083	527
5. Thursday	1801	89	1162	550
6. Friday	2121	87	1379	655
7. Saturday	2859	140	1879	840
8. Not stated	1			1
TOTALS	13906	686	8951	4269

4. THE DRIVER

THE DRIVER	NUMBER OF DRIVERS			
	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Accidents
SEX				
1. Male	18725	796	11063	6866
2. Female	1300	47	804	449
AGE				
1. Under 18 years	453	21	278	154
2. 18 to 24 years	4787	211	2808	1768
3. 25 to 40 years	8812	355	5196	3261
4. 41 to 54 years	4150	157	2526	1467
5. 55 to 64 years	1185	62	696	427
6. 65 years and over	437	26	254	157
7. Not stated	201	11	109	81
DRIVING EXPERIENCE				
1. Less than 3 months	292	16	182	94
2. 3 to 6 months	160	7	94	59
3. 6 to 12 months	191	4	136	51
4. 1 to 4 years	3475	143	2058	1274
5. 5 years and over	14770	548	8779	5443
6. Not stated	1137	125	618	394
CONDITION				
1. Intoxicated	230	16	125	89
2. Physical defect	96	7	61	28
3. Extreme fatigue	197	9	106	82
4. Normal	19502	811	11575	7116
LICENSE				
1. Licensed	18928	761	11259	6908
2. Unlicensed	969	70	545	354
3. Not stated	128	12	63	53
Total number of drivers	20025	843	11867	7315
MISCELLANEOUS				
1. Hit and run	134	10	73	51
2. Hit and run apprehended	170	4	85	81
3. Arrested or summoned	3062	155	1680	1227
4. Non-residents arrested	319	17	160	142
Totals	3685	186	1998	1501

5. RESIDENCE OF DRIVER

RESIDENCE OF DRIVER	NUMBER OF DRIVERS			
	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Accidents
1. Ontario	18637	773	11133	6731
2. Quebec	180	10	74	96
3. Other provinces	64	2	34	28
4. Michigan	556	25	307	224
5. Ohio	58	1	31	26
6. New York	282	14	150	118
7. Illinois	51	4	26	21
8. Massachusetts	13		10	3
9. Pennsylvania	50	5	29	16
10. Other states	130	8	70	52
11. All others	4	1	3	
Totals	20025	843	11867	7315

6. ACTION OF DRIVER

ACTION OF DRIVER	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Only Accidents
1. Speed too fast for road or traffic conditions	1534	98	805	631
2. On wrong side of road	1238	70	579	589
3. Did not have right of way	817	24	452	341
4. Cutting in	102	2	68	32
5. Passing standing street car	45		45	
6. Passing on curve or hill	83	3	44	36
7. Passing on wrong side	21		15	6
8. Failed to signal	236		109	127
9. Car ran away—no driver	74	1	37	36
10. Drove off roadway	613	47	357	209
Totals	4763	245	2511	2007

7. DIRECTION OF TRAVEL

DIRECTION OF TRAVEL	NUMBER OF VEHICLES			
	Total	Fatal	Personal Injury	Property Damage Only
1. Going straight	15849	772	9394	5683
2. Turning right	529	8	325	196
3. Turning left	1848	27	1178	643
4. Backing	264	8	187	69
5. Parked or standing still	1108	12	549	547
6. Slowing down or stopping	505	12	255	238
7. Skidding	804	23	365	416
Totals	20907	862	12253	7792

8. AMOUNT OF PROPERTY DAMAGE

$ 1,712,467.00

9. THE VEHICLE

THE VEHICLE	NUMBER OF VEHICLES			
	Total	Fatal	Personal Injury	Property Damage only
TYPE				
1. Passenger car	16858	634	10050	6174
2. Commercial vehicle	3295	182	1690	1423
3. Taxicab	209	5	126	78
4. Bus	110	7	64	39
5. Motorcycle	308	23	271	14
6. Trailer	81	4	33	44
7. All others	7	2	3	2
8. Not stated	39	5	16	18
Totals	20907	862	12253	7792
CONDITION				
1. In apparent good condition	19726	787	11556	7383
2. Brakes defective	317	33	218	66
3. Steering mechanism defective	104	4	58	42
4. Glaring headlights	114	5	58	51
5. One or both headlights out	76	5	40	31
6. Tail-light out or obscured	76	3	48	25
7. No chain (wet or icy road)				
8. Other defects in equipment	187	8	96	83
9. Puncture or blow-out	166	8	94	64
10. Not stated	141	9	85	47
Totals	20907	862	12253	7792
BRAKES				
1. Two-wheel	1420	80	963	377
2. Four-wheel	19231	767	11143	7821
3. Not stated	256	15	147	94
Totals	20907	862	12253	7792
TIRES				
1. Pneumatic (high pressure)	1235	77	665	493
2. Semi-balloon or balloon	19400	771	11432	7197
3. Solid rubber	12		9	3
4. Not stated	260	14	147	99
Totals	20907	862	12253	7792
INSURANCE				
1. Insured	12155	449	6858	4848
2. Un-insured	7016	291	4424	2301
3. Not stated	1736	122	971	643
Totals	20907	862	12253	7792

10. Weather Conditions

Weather Conditions	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage Only
1. Clear	9350	472	6122	2756
2. Cloudy	1941	89	1286	566
3. Fog	206	12	111	83
4. Rain	1670	78	1044	547
5. Snow or Sleet	739	34	388	317
6. Not stated				
Totals	13906	686	8951	4269

11. Light Conditions

Light Conditions	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage Only
1. Daylight	7461	336	4926	2199
2. Dusk	640	32	408	200
3. Dark	5804	318	3617	1869
4. Not stated	1			1
Totals	13906	686	8951	4269

12. THE PEDESTRIAN

THE PEDESTRIAN	No. Accidents	
	Fatal	Non-Fatal
ACTIONS		
Crossing at street intersections:		
1. (a) With signal	3	104
2. (b) Against signal	4	117
3. (c) No signal	40	645
4. (d) Diagonally	2	49
5. Crossing between intersections	71	734
6. Waiting for or getting on or off street car	2	72
7. Standing in safety zone		3
8. Getting on or off other vehicle	4	27
9. Children playing in street	33	662
10. At work in roadway	10	96
11. Riding or hitching on vehicle	8	50
12. Walking on highway	48	136
13. Coming from behind parked vehicle or object	26	508
14. Crossing highway	45	178
15. On sidewalk	1	71
CONDITION		
1. Intoxicated	16	123
2. Physical defect	11	59
3. Confused by traffic	33	360
4. View obstructed	13	374
5. Normal	224	2536
Totals	297	3452

13. CLASSIFICATION OF VICTIMS

CLASSIFICATION OF VICTIMS	Killed	Injured
1. Drivers	150	2273
2. Passengers	221	4484
3. Pedestrians	299	3696
4. Others — (Persons in horse-drawn vehicles, etc.)	9	135
5. Bicyclists	65	1268
6. Motorcycle drivers	17	205
7. Motorcycle passengers	5	96
Totals	766	12092

14. NATURE OF INJURIES

NATURE OF INJURIES	Fatal	Non-Fatal
1. Fractured skull	422	253
2. Fractured spine	61	28
3. Other fractures	51	1828
4. Concussion of brain	13	257
5. Severe general shock with bruises and cuts	34	5816
6. Slight shock and shake up		2064
7. Internal injuries	160	175
8. Other injuries (sprains, dislocations, wrenches, etc.)		501
9. Cuts by glass (only)	2	1126
10. Drowned	11	
11. Burned	11	7
12. Asphyxiated	1	
13. Not stated		37
Totals	766	12092

15. THE ROAD

THE ROAD	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage only
LOCATION				
1. Street intersection	4234	95	2972	1167
2. Between street intersections	3313	129	2618	566
3. Rural intersection	865	47	482	336
4. Straight road	3103	244	1665	1194
5. Private driveway	510	14	295	201
6. Curve	935	58	461	416
7. Hill	582	43	269	270
8. R. R. crossing (a) Man on duty or gates	9		7	2
9. R.R. Crossing (b) Automatic signal	21	6	7	8
10. R.R. Crossing (c) Unguarded	168	35	94	39
11. Bridge	160	11	79	70
12. On ferry or dock	6	4	2	
Totals	13906	686	8951	4269
TYPE				
1. Earth	183	15	119	49
2. Gravel or crushed stone	1445	137	752	556
3. Paved—hard surface	12278	534	8080	3664
Totals	13906	686	8951	4269
SURFACE				
1. Dry surface	9255	488	6215	2552
2. Wet surface	2633	124	1707	802
3. Muddy surface	33	5	16	12
4. Snowy surface	709	30	369	310
5. Icy surface	1276	39	644	593
6. Not stated				
Totals	13906	686	8951	4269
CONDITION				
1. In good condition	13661	670	8822	4169
2. Defect in roadway	93	5	45	43
3. Road under repair	139	10	78	51
4. Obstruction not lighted	13	1	6	6
Totals	13906	686	8951	4269

J. P. BICKELL,
Registrar of Motor Vehicles.
By A. H. Rowan

Nature of Accidents (See Summary, Section 1):

The 13,906 mishaps comprised 686 fatal accidents (in which one or more persons were fatally injured), 8,951 personal injury accidents (in which one or more persons were non-fatally injured), and 4,269 accidents involving damage to property, in excess of $50.00, only.

As compared with the corresponding totals for 1936, all accidents increased by 22.1 per cent.; fatal accidents advanced in number by 36.9 per cent.; while personal injury and property damage only accidents increased by 14.7 and 38.4 per cent., respectively.

Types of Accidents (See Summary, Section 1):

More than 93 per cent. of the accidents reported were included within five classifications: Collision with other motor vehicle (5,782), 41.6 per cent.; collision with pedestrian (3,749), 27.0 per cent.; collision with bicycle (1,285), 9.2 per cent.; collision with fixed object (1,269), 9.1 per cent.; and non-collision (overturning, running off roadway, etc.) accidents 6.3 per cent.

The most significant increases from the 1936 totals were found in the collision with fixed object type, 35.3 per cent. advance; collision with other motor vehicle type, 29.9 per cent. increase, and in the non-collision type, 29.8 per cent. increase. These advances may be compared with the general increase in all accidents amounting to 22.1 per cent.

Of the eleven types of accident classified, the collision with fixed object and collision with bicycle types are the only two which have increased in number in each successive year since 1931 — the first year official figures were made available.

Types of Fatal Accidents (See Summary, Section 1):

More than two of every five (43.3%) of the fatal accidents were of the collision with pedestrian type. Collisions between motor vehicles accounted for 18.9 per cent. of the total while non-collision accidents made up 8.9 per cent. Fifty-nine (8.6%) of the fatal accidents were of the collision with fixed object type and a corresponding number (59) involved collisions between motor vehicles and bicycles.

Number of Persons Fatally Injured (See Summary, Section 1):

The number of persons fatally injured (766) during 1937 was greater than in any previous year in the history of the motor vehicle in Ontario and represented an increase of 40.3 per cent. from the total of 546 deaths reported during 1936.

For purposes of comparison, the death rates on the bases of gasoline consumption (vehicle travel), motor vehicle registrations and (estimated) population for the years 1936 and 1937 are shown below:

DEATH RATE PER	1936	1937
10,000,000 (Imp.) gallons of gasoline consumed....	20.5	22.8
10,000 vehicles registered........................	8.8	11.7
100,000 population...........................	14.8	20.6

Motor vehicles registered in Ontario during 1937 totalled 655,688 or 6.2 per cent. more than were registered during the previous year. The percentage advance in gasoline consumption was 13.7. The Ontario death rate per 10,000,000 (U. S.) gallons of gasoline consumed was 19.0. This rate should be used when comparison is made with corresponding rates for the U. S. A.

Number of Deaths, by Type of Accident (See Summary, Section 1):

Two hundred and ninety-nine (299) or 39.0 per cent. of the deaths reported during 1937 were the result of collisions between motor vehicles and pedestrians. In 1936 this type of mishap accounted for 43.0 per cent. of the total.

Collisions between motor vehicles resulted in 160 deaths (20.9% of total), 70 persons (9.2%) suffered fatal injuries in the collision with fixed object type of accident, and non-collision accidents resulted in 69 fatalities (9.0% of total). Collisions with bicycles claimed 60 lives or 7.8 per cent. of the total of 766 deaths during the year.

As compared with the 40.3 per cent. increase in all fatalities, bicycle accidents resulted in 60 deaths as compared with 30 in 1936 (100% increase), fatalities from the collision with other motor vehicle type of accident increased in number by 68.4 per cent., and the number of persons fatally injured in collision with fixed object and collision with railroad train accidents advanced by 62.8 and 62.5 per cent., respectively.

Number of Persons Fatally Injured, Detailed by Sex and Age Group (See Summary, Section 1):

The number and percentage distribution of persons fatally injured and the death rate per 100,000 population are shown in the following table:

Age Group	1936 No.	1936 %	1937 No.	1937 %	Death Rate per 100 M. Population (1937)
0– 4 years	26	4.8	39	5.1	11.7
5–14 years	49	9.0	87	11.4	12.3
15–35 years	172	31.5	248	32.4	19.4
36–54 years	134	24.5	165	21.5	18.9
55–64 years	51	9.3	109	14.2	40.2
65 years and over	114	20.9	118	15.4	46.8
Total	546	100.0	766	100.0	20.6 (average rate)

As compared with the 40.3 per cent. increase in total fatalities, the percentage increase in deaths in age group '55 to 64' amounted to 113.7; the number of children, between '5 and 14 years,' fatally injured showed an increase of 77.6 per cent.; and the increase in deaths in age group '0–4 years' amounted to 50.0 per cent. On the basis of population, however, the death rate of children was considerably below the average for all groups.

Of the 766 persons fatally injured during the year, 559 (73.0%) were male and 207 (27.0%) were female. The corresponding percentages for the previous year were: male, 76.7 per cent., and female, 23.3 per cent.

Fatal Accidents Resulting in 'Multiple' Deaths:

Of the 686 fatal accidents reported during 1937 —

635 resulted in 1 fatality per accident
35 " " 2 fatalities per accident
8 " " 3 " " "
5 " " 4 " " "
1 " " 5 " " "
2 " " 6 " " "

Of the 501 fatal accidents reported during 1936 —

468 resulted in 1 fatality per accident
26 " " 2 fatalities per accident
3 " " 3 " " "
3 " " 4 " " "
1 " " 5 " " "

From the above it will be seen that 7.4 per cent. of the fatal accidents during 1937 resulted in 17.1 per cent. of the deaths. In 1936, 6.6 per cent. of the fatal accidents resulted in 14.3 per cent. of the deaths.

Classification of Persons Fatally Injured (See Summary, Section 13):

The classification of persons fatally injured during the years 1936 and 1937 is shown in the following table:

	1936 No.	1936 %	1937 No.	1937 %
Drivers	97	17.8	150	19.6
Passengers	156	28.6	221	28.8
Pedestrians	244	44.7	299	39.0
Others (persons in horse-drawn vehicles, etc.)	8	1.4	9	1.2
Bicyclists	30	5.5	65	8.5
Motorcycle drivers	9	1.6	17	2.2
Motorcycle passengers	2	.4	5	.7
Total	546	100.0	766	100.0

As compared with the 40.3 per cent. increase in total fatalities, 65 bicyclists were killed during 1937 as against 30 during 1936. One hundred and fifty (150) drivers were fatally injured, representing an increase of 54.6 per cent. from the corresponding total for the previous year.

Types of Accident Resulting in Non-Fatal Injuries (See Summary, Section 1):

About 4 of every 5 (78.2%) of the injuries reported during 1937 were the result of three types of accident: collision with other motor vehicle, 37.9 per cent.; collision with pedestrian, 29.9 per cent.; and collision with bicycle, 10.4 per cent. Collisions with fixed objects and non-collision accidents accounted for an additional 8.6 and 7.0 per cent.

Injuries resulting from collisions between motor vehicles (4,578) increased by 28.6 per cent. as compared with the 18.0 per cent. advance in all injuries reported.

Number of Persons Non-Fatally Injured, Detailed by Age Group and Sex (See Summary, Section 1):

The number and percentage of injured persons by age group are shown in the following table:

Age Group	1936 No.	1936 %	1937 No.	1937 %	Population* %
0– 4 years	498	5.1	586	5.1	9.0
5–14 years	1,676	17.4	1,854	16.1	19.0
15–35 years	4,085	42.3	4,865	42.4	34.4
36–54 years	2,207	22.9	2,673	23.3	23.5
55–64 years	676	7.0	848	7.4	7.3
65 years and over	515	5.3	658	5.7	6.8
Not stated**	594	...	608	...	...
Total	10,251	100.0	12,092	100.0	100.0

As compared with the 18.0 per cent. increase in the number of persons injured, from the same total for 1936, injuries in age group '36–54 years' advanced by 21.1 per cent., while the totals in age group '65 years and over' and '55–64 years' showed increases of 27.8 per cent. and 25.4 per cent. While the number of children (under 15 years) injured increased with the general advance, the percentage of 'child injuries' was lower than the corresponding proportion for 1936.

Of the 12,092 persons injured during the year, 7,758 or 64.2 per cent. were males. The corresponding percentage for 1936 was 63.9.

Classification of Persons Non-Fatally Injured (See Summary, Section 13):

Class of Victim	1936 No.	1936 %	1937 No.	1937 %
Drivers	1,815	17.7	2,273	18.8
Passengers	3,633	35.4	4,484	37.1
Pedestrians	3,362	32.8	3,696	30.6
Others (persons in horse-drawn vehicles	123	1.2	135	1.1
Bicyclists	1,106	10.8	1,253	10.3
Motorcycle drivers	182	1.8	205	1.7
Motorcycle passengers	30	.3	46	.4
Total	10,251	100.0	12,092	100.0

The number of drivers and passengers non-fatally injured increased by 25.2 per cent. and 23.4 per cent., respectively, as compared with the general increase in injuries amounting to 18.0 per cent.

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* Percentage distribution of Ontario population by age group.

** Not included in percentage computation.

All Accidents and Fatal Accidents Classified by Hours of Occurrence (See Summary, Section 2):

	All Accidents				Fatal Accidents			
	1936		1937		1936		1937	
Hours	No.	%	No.	%	No.	%	No.	%
12- 1 A.M.	480	4.2	568	4.1	21	4.2	27	3.9
1- 2	270	2.4	385	2.8	24	4.9	15	2.2
2- 3	199	1.8	232	1.7	9	1.8	10	1.5
3- 4	136	1.2	152	1.1	6	1.2	6	.9
4- 5	102	.9	110	.8	5	1.0	8	1.2
5- 6	88	.8	98	.7	6	1.2	4	.6
6- 7	135	1.2	136	1.0	6	1.2	8	1.2
7- 8	183	1.6	245	1.8	4	.8	12	1.8
8- 9	294	2.6	385	2.8	10	2.0	14	2.1
9-10	317	2.8	382	2.7	9	1.8	12	1.8
10-11	438	3.9	489	3.5	18	3.6	18	2.6
11-12	532	4.7	623	4.5	22	4.4	31	4.5
12- 1 P.M.	549	4.8	594	4.3	18	3.6	24	3.5
1- 2	494	4.4	607	4.4	22	4.4	20	2.9
2- 3	560	5.0	670	4.8	26	5.3	33	4.8
3- 4	580	5.1	770	5.5	15	3.0	41	6.0
4- 5	776	6.9	962	6.9	31	6.3	57	8.3
5- 6	969	8.6	1,203	8.7	32	6.5	56	8.2
6- 7	835	7.4	1,016	7.3	40	8.1	54	7.9
7- 8	880	7.8	1,036	7.5	44	8.9	40	5.9
8- 9	762	6.7	991	7.2	36	7.3	55	8.1
9-10	609	5.4	758	5.5	33	6.7	57	8.3
10-11	556	4.9	730	5.3	23	4.7	44	6.4
11-12	558	4.9	701	5.1	35	7.1	37	5.4
Not stated	86	...	63	...	6	...	3	...
Total	11,388	100.0	13,906	100.0	501	100.0	686	100.0

As has been the case in previous years, more accidents occurred between 5 and 6 P.M. than at any other hour. Almost two-fifths (37.6%) of all accidents and 38.4 per cent. of the fatal accidents happened during the five-hour period, 4 to 9 P.M.

The following table shows the percentage distribution of all accidents and fatal accidents during 1936 and 1937, by eight-hour periods:

	All Accidents		Fatal Accidents	
Eight-Hour Period	1936	1937	1936	1937
12 A.M. to 7:59 A.M.	14.1	14.0	16.3	13.3
8 A.M. to 3:59 P.M.	33.3	32.5	28.1	28.2
4 P.M. to 11:59 P.M.	52.6	53.5	55.6	58.5
Total	100.0	100.0	100.0	100.0

From the above it will be seen that more than half of all accidents and almost three-fifths of the fatal mishaps took place during the eight-hour period, 4 to 12 P.M. It will also be noticed that the greatest increase in both fatal and all accidents occurred during this period.

All Accidents and Fatal Accidents Segregated by Day of Occurrence (See Summary, Section 3):

All Accidents by Day of Occurrence	1936		1937	
	No.	%	No.	%
Sunday	1,519	13.3	2,061	14.8
Monday	1,473	13.0	1,748	12.6
Tuesday	1,426	12.5	1,616	11.6
Wednesday	1,482	13.0	1,699	12.2
Thursday	1,616	14.2	1,801	12.9
Friday	1,534	13.5	2,121	15.3
Saturday	2,338	20.5	2,859	20.6
Total	11,388	100.0	13,906	100.0

Fatal Accidents by Day of Occurrence	1936 No.	1936 %	1937 No.	1937 %
Sunday	67	13.4	100	14.6
Monday	66	13.2	99	14.4
Tuesday	59	11.8	82	11.9
Wednesday	73	14.6	89	13.0
Thursday	68	13.6	89	13.0
Friday	56	11.2	87	12.7
Saturday	112	22.4	140	20.4
Total	501	100.0	686	100.0

As in other years, more accidents — fatal and otherwise — occurred on Saturdays than on any other day. One-fifth (20.4%) of the fatal accidents and 20.6 per cent. of all mishaps reported during 1937 happened on that day of the week. More than three-fifths of both fatal and all accidents took place during the four-day period, Friday to Monday.

All Accidents and Fatal Accidents Classified by Month of Occurance:

	All Accidents				Fatal Accidents				Gasoline Consumption*
	1936		1937		1936		1937		
Month	No.	%	No.	%	No.	%	No.	%	%
January	706	6.2	849	6.1	19	3.8	42	6.1	5.5
February	499	4.4	712	5.1	15	3.0	30	4.4	4.5
March	624	5.5	885	6.4	21	4.2	34	5.0	6.3
April	694	6.1	871	6.3	33	6.6	42	6.1	7.1
May	913	8.0	1,076	7.8	35	7.0	46	6.7	9.0
June	944	8.3	1,211	8.7	30	6.0	65	9.5	9.9
July	1,037	9.1	1,360	9.8	63	12.6	84	12.2	11.2
August	1,203	10.6	1,370	9.8	62	12.3	80	11.7	11.4
September	1,184	10.4	1,444	10.4	60	11.9	71	10.3	10.7
October	1,207	10.6	1,425	10.2	58	11.6	64	9.3	9.0
November	1,168	10.2	1,339	9.6	58	11.6	74	10.8	8.4
December	1,209	10.6	1,364	9.8	47	9.4	54	7.9	7.0
Total	11,388	100.0	13,906	100.0	501	100.0	686	100.0	100.0

More accidents were reported during September than during any other month during 1937. September, with a total of 1,440 accidents (10.4% of the year's total) was followed, in order of number, by October, 1,425 (10.2% of total) and August, 1,360 (9.8%).

As regards fatal accidents, July was the peak month with 84 reported accidents resulting in 101 deaths.

The average number of accidents reported per month during 1937 was 1,159 as compared with 949 for 1936. There were, on an average, 57 fatal accidents reported in each month of 1937 as against 47 in each month of the previous year.

The following table shows the percentage distribution of all accidents and fatal accidents by quarters of the year:

	All Accidents		Fatal Accidents	
	1936	1937	1936	1937
	%	%	%	%
January-March	16.1	17.6	11.0	15.5
April-June	22.4	22.8	19.6	22.3
July-September	30.1	30.0	36.8	34.2
October-December	31.4	29.6	32.6	28.0
Total	100.0	100.0	100.0	100.0

The greatest increase in the number of all accidents and fatal accidents occurred in the first quarter of the year. The advance in all accidents during this (January to March) period amounted to 33.7 per cent. while the number of fatal accidents increased by 92.7 per cent. The generally favourable weather conditions prevailing during the early months of 1937 is believed to have been a factor leading to the large increase in accidents during that period.

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* Percentage of total gasoline consumed in each month during 1937.

Accidents, Deaths and Injuries, Detailed by Counties and Cities:

County or District	Accidents*	Deaths	Injuries
Algoma	150	7	112
Brant	221	14	201
Bruce	29	9	46
Carleton	449	26	296
Cochrane	60	9	34
Dundas	54	6	45
Dufferin	45	2	35
Durham	126	9	98
Elgin	152	11	103
Essex	770	42	748
Frontenac	166	12	135
Glengarry	46	6	35
Grenville	87	5	66
Grey	79	6	57
Haldimand	80	10	61
Haliburton	8	3	17
Halton	184	14	164
Hastings	232	15	170
Huron	37	13	47
Kenora	94	1	44
Kent	386	23	353
Lambton	169	14	141
Lanark	50	6	31
Leeds	158	8	96
Lennox and Addington	69	9	63
Lincoln	252	28	226
Manitoulin	11	..	5
Middlesex	826	30	666
Muskoka	33	3	36
Nipissing	217	9	155
Norfolk	106	13	94
Northumberland	87	9	61
Ontario	241	18	225
Oxford	240	14	171
Parry Sound	47	7	39
Peel	171	8	147
Perth	118	5	106
Peterborough	165	7	126
Prescott	24	2	17
Prince Edward	7	3	3
Rainy River	34	4	29
Renfrew	64	9	71
Russell	13	2	13
Simcoe	241	17	295
Stormont	77	7	58
Sudbury	158	26	137
Thunder Bay	276	15	232
Timiskaming	91	20	79
Victoria	32	2	50
Waterloo	212	24	191
Welland	426	21	375
Wellington	203	9	177
Wentworth	1,166	41	997
York	4,467	133	4,113
Total	13,906	766	12,092

* Of accidents reported to the Motor Vehicles Branch only those occurring on public streets or highways and directly or indirectly involving a moving motor vehicle are included as 'motor vehicle accidents.' Exceptions are made to this general definition in dealing with improperly parked or standing motor vehicles when no moving vehicle is involved.

Fifty-seven per cent. of the accidents and 39.1 per cent. of the fatalities reported during 1937 occurred in the six counties — York, Essex, Wentworth, Middlesex, Lincoln and Carleton (According to 1936 figures prepared by the Ontario Department of Municipal Affairs, 52.4 per cent. of the total population of the Province was centered in these counties).

Accidents, Deaths and Injuries, Detailed by Counties and Cities (Cont'd):

Cities	Accidents	Deaths	Injuries
Belleville	79	3	52
Brantford	138	4	120
Chatham	93	1	70
Fort William	84	5	62
Galt	64	7	35
Guelph	101	2	67
Hamilton	920	24	739
Kingston	101	2	72
Kitchener	28	2	27
London	532	16	386
Niagara Falls	94	2	73
North Bay	67	1	42
Oshawa	85	1	71
Ottawa	317	17	192
Owen Sound	25	..	19
Peterborough	104	1	97
Port Arthur	56	5	52
St. Catharines	110	7	90
St. Thomas	13	2	18
Sarnia	95	2	58
Sault Ste. Marie	93	1	62
Stratford	35	..	32
Sudbury	48	7	53
Toronto	3,503	67	3,248
Welland	18	..	18
Windsor	520	19	458
Woodstock	73	..	58
Total	7,396	198	6,271

All Accidents and Fatal Accidents Classified by Road Location (See Summary, Section 15):

Location	All Accidents 1936	All Accidents 1937	Fatal Accidents 1936	Fatal Accidents 1937
Street intersection	3,593	4,234	72	95
Between street intersections	3,132	3,313	106	129
Rural intersection	520	865	24	47
Straight road	2,531	3,103	185	244
Private driveway	356	510	17	14
Curve	599	935	37	58
Hill	411	582	28	43
R. R. Crossing — Man on duty or gates	6	9	..	..
Automatic signal	26	21	5	6
Unguarded	112	168	22	35
Bridge	101	160	4	11
On ferry or dock	1	6	1	4
Total	11,388	13,906	501	686

As was the case in previous years, accidents at street intersections made up a larger share of the total than any other group. Almost one third (30.1%) of all accidents and 13.8 per cent. of the fatal mishaps took place at urban street corners. Accidents between intersections made up 23.8 per cent. of the total accidents and 18.8 per cent. of the 'fatal' total. The higher 'fatal rate' of 'between intersection' accidents is to a large degree due to the generally higher speeds of travel between blocks and to the all-too-common practice of walking from behind or in front of parked vehicles or darting from the curb without exercising proper care.

The increased seriousness of rural accidents is again indicated by the above table. Accidents which occurred on rural straight roads accounted for 22.3 per cent. of all accidents and 35.6 per cent. of the fatal accidents reported during 1937.

Weather, Road and Road Surface Conditions Prevailing (See Summary, Sections 10 and 15):

Two-thirds (67.2%) of all accidents and 68.8 per cent. of the fatal accidents during 1937 happened in 'clear' weather. Two-thirds (66.5%) of all accidents and 71.1 per cent. of the fatal accidents took place on dry road surface and 98.2 per cent. happened on roads which were said to have been 'in good condition.' The figures suggest that drivers can and generally do make allowance for more obvious hazards but a clear road breeds a false sense of security which too often leads to an accident.

Light Conditions Prevailing (See Summary, Section 11):

Light Condition	All Accidents 1936	All Accidents 1937	Fatal Accidents 1936	Fatal Accidents 1937
Daylight	6,245	7,461	229	336
Dusk	535	640	22	32
Dark	4,598	5,804	250	318
Not stated	10	1	..	..
Total	11,388	13,906	501	686

During 1937, 53.7 per cent. of the accidents occurred in daylight, 41.7 per cent. happened after dark and 4.6 per cent. took place during 'dusk.' The corresponding percentages for fatal accidents were: 48.9 daylight; 46.4 dark; and 4.7 dusk.

As compared with the 22.1 per cent. increase in all accidents, 'day' accidents advanced by 19.5 per cent. while night accidents showed a gain of 26.2 per cent. Fatal accidents during daylight and after dark showed percentage increases of 46.7 and 27.2, respectively, as compared with the advance of 36.9 per cent. in all fatal accidents.

Actions of Pedestrians Involved in Accidents (See Summary, Section 12):

Actions of Pedestrian	In Fatal Accidents 1936	In Fatal Accidents 1937	In Non-Fatal Accidents 1936	In Non-Fatal Accidents 1937
Crossing at Street Intersection:				
(a) with signal	4	3	83	104
(b) against signal	7	4	136	117
(c) no signal	26	40	523	645
(d) diagonally	7	2	44	49
Crossing between intersections	45	71	611	734
Waiting for, or getting on or off, street car	2	2	70	72
Standing in safety zone	..	..	3	3
Getting on or off other vehicle	3	4	18	27
Children playing in street	36	33	883	662
At work in roadway	7	10	71	96
Riding or hitching on vehicle	7	8	44	50
Walking on highway	38	48	126	136
Coming from behind parked vehicle	15	26	338	508
Crossing highway	31	45	117	178
On sidewalk	5	1	91	71
Total	233	297	3,158	3,452

While, as in previous years, the largest single share of pedestrian injuries involved the action, 'children playing in the street,' there was a considerable decrease in both fatal and non-fatal accidents resulting from this action, despite an increase in total pedestrian accidents reported. Unsafe 'adult' actions on the other hand, showed a considerable increase. 'Crossing between intersections,' 'walking on rural highways,' and 'coming from behind parked vehicles' were three pedestrian actions which resulted in 145 fatal pedestrian accidents or 48 per cent. more than in 1936.

Sex* of Drivers Involved in Motor Vehicle Accidents (See Summary, Section 4):

Of the total of 20,025 drivers involved in reported accidents during 1937, 93.5 per cent. were male, and of the 843 in fatal accidents, 94.4 per cent. were male. (Drivers registered in Ontario during 1937 totalled 900,051 — about 83 per cent. were male.)

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* In the absence of adequate bases of measurement, data pertaining to sex, age and experience of drivers should not be used for comparing the relative driving dependability of the two sexes, or of the different age or 'experience' groups.

Drivers in All Accidents and in Fatal Accidents Detailed by Age Group:

Age Group	In All Accidents No.	In All Accidents %	In Fatal Accidents No.	In Fatal Accidents %	% of Total Registered %
Under 18 years	453	2.3	21	2.5	1.3
18–24 years	4,787	24.1	211	25.4	18.8
25–40 "	8,812	44.5	355	42.7	44.5
41–54 "	4,150	20.9	157	18.9	23.6
55–64 "	1,185	6.0	62	7.4	8.4
65 years and over	437	2.2	26	3.1	3.4
Not stated	201	..	11	..	..
Total	20,025	100.0	843	100.0	100.0

Length of Experience of Drivers Involved:

Experience of Drivers	In All Accidents No.	%	In Fatal Accidents No.	%
Less than 3 months	292	1.6	16	2.2
3- 6 months	160	.8	7	1.0
6-12 months	191	1.0	4	.6
1- 4 years	3,475	18.4	143	19.9
5 years and over	14,770	78.2	548	76.3
Not stated	1,137	..	125	..
Total	20,025	100.0	843	100.0

Residence of Drivers (See Summary, Section 5):

Ninety-three per cent. of the drivers in all accidents and 91.7 per cent. of the drivers involved in fatal accidents were residents of Ontario. The corresponding percentages for the previous year were 93.6 and 90.7.

Accident Repeaters:

'Accident repeaters' (persons in two or more accidents) totalled 422 (2.1% of the drivers in reported accidents) and were involved in 857 accidents (6.2% of total accidents) during 1937.

Of the 422 drivers, 401 were 'new' repeaters (2 or more accidents in 1937 but no previous accident on record) and 21 were 'old' repeaters (drivers in 2 or more accidents in 1937 but with previous records). Further details are shown below:

In 1937 there were:

391 'new' repeaters in 782 accidents (2 each)
10 " " " 30 " (3 each)
19 'old' " " 38 " (2 each)
1 " " " 3 " (3 each)
1 " " " 4 " (4 each)
Total of 422 drivers involved in 857 accidents.

Since September 1, 1930, when records were commenced, 8,639 drivers (8.0% of the 107,703 drivers involved during this period) were involved in (not 'caused') 18,824 accidents (25.0% of the 75,409 mishaps reported during this time).

The responsibility for the 18,824 accidents was apportioned as follows:

44.3 per cent. were attributed to unsafe or improper driving actions of the 'repeater.'
29.0 " " " " " " " " " " " 'other driver.'
19.9 " " " " " " " " " " " 'other person, etc.'
6.8 " " " " " responsibility undetermined.

Accidents, Deaths and Injuries Classified by Location:

Location	Accidents No.	%	Fatalities No.	%	Persons Injured No.	%
Cities	7,396	53.2	198	25.9	6,271	51.9
Towns	537	3.9	56	7.3	460	3.8
Villages	168	1.2	23	3.0	132	1.1
Total (Urban)	8,101	58.3	277	36.2	6,863	56.8
King's Highways	4,255	30.6	319	41.6	3,755	31.0
County Roads	951	6.8	115	15.0	942	7.8
Township Roads	599	4.3	55	7.2	532	4.4
Total (Rural)	5,805	41.7	489	63.8	5,229	43.2
Grand Total	13,906	100.0	766	100.0	12,092	100.0

From the above table it will be observed that more than half (53.2%) of the accidents and (51.9%) of the injuries occurred in the cities of the Province. The greater severity of accidents on the rural roads is indicated by the high 'fatal rate' of King's Highway accidents. Almost 42 per cent. of the deaths but only 30.6 per cent. of the accidents occurred on these highways. About 42 per cent. (41.7%) of all accidents took place on rural (King's Highway, county and township) roads, resulting in 63.8 per cent. of the deaths reported.

To permit comparison, accidents, deaths and injuries for 1936, by location, are shown in the table below:

	Accidents		Fatalities		Persons Injured	
Location	No.	%	No.	%	No.	%
Cities	6,411	56.3	143	26.2	5,619	54.8
Towns	498	4.4	43	7.9	429	4.2
Villages	139	1.2	21	3.8	121	1.2
Total (Urban)	7,048	61.9	207	37.9	6,169	60.2
King's Highways	2,756	24.2	185	33.9	2,537	24.7
County Roads	1,066	9.4	98	17.9	1,054	10.3
Township Roads	518	4.5	56	10.3	491	4.8
Total (Rural)	4,340	38.1	339	62.1	4,082	39.8
Grand Total	11,388	100.0	546	100.0	10,251	100.0

The large (54.4%) advance in the number of 'King's Highway' accidents was to a large extent a 'statistical' increase due to the assumption of many miles of county roads now designated as King's Highways.

The following table shows the amount of damage resulting from accidents occurring at various locations:

	Amount of Property Damage		
Location	1936	1937	Average*
Cities	$ 358,055	$ 450,197	$ 61.00
Towns	56,369	71,758	134.00
Villages	12,156	21,990	131.00
Total (Urban)	426,580	543,945	67.00
King's Highways	562,343	931,767	219.00
County Roads	197,777	168,619	177.00
Township Roads	55,151	68,136	114.00
Total (Rural)	815,271	1,168,522	201.00
Grand Total	$1,241,851	$1,712,467	$ 123.00

The higher average property damage loss resulting from rural accidents may be attributed to the higher rates of speed which generally prevail on such roads, and, also, to the more frequent failure to report mishaps of less serious consequence.

Nature of Conflict*

A special study made of 2,177 collision with other motor vehicle accidents on the King's Highways during 1937 gave the following results:

	Daylight		Dark		Total	
Nature of Conflict*	No.	%	No.	%	No.	%
Medial	415	37.9	624	57.7	1,039	47.7
Intersectional	339	30.9	148	13.7	487	22.4
Marginal	48	4.4	97	8.9	145	6.7
Internal stream	293	26.8	213	19.7	506	23.2
Total	1,095	100.0	1,082	100.0	2,177	100.0

*'Medical' designates collisions which involved vehicles approaching from opposite directions—head-on and sideswipe collisions.

'Intersectional' — accidents at rural intersections or private driveways.

'Marginal' — collisions which occurred on margins of road (majority involved collisions with parked vehicles).

'Internal stream' — collisions with vehicles travelling in same direction (rear-end collisions, or those resulting from cutting in or out too quickly, etc.).

Some Factors which Cause or Contribute to the Causation of Motor Vehicle Accidents:

While, as has previously been mentioned, considerable difficulty is experienced in determining the causes and contributing causes of motor vehicle accidents and, therefore, in the determination of the relative importance of various causes, sufficient information is available to permit the enumeration of more important factors.

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* Average damage per reported accident during 1937.

It is known that every accident involves at least three factors, namely — the driver, the vehicle, and the highway. In addition, some mishaps involve the pedestrian, bicyclist or other highway user and contributing causes such as time, weather conditions, etc.

While the conditions of the road, road surface, degree of illumination; and the condition or characteristics of the vehicles have an important bearing on the safety of persons using the roads, it is generally recognized that the largest share of responsibility for the accident problem rests upon the human element — the drivers, pedestrians, bicyclists and others using the streets and highways. With this in mind, the following list of more common causes and contributing causes which, in themselves or in combination, lead to accidents, has been prepared: (no attempt has been made to enumerate items in order of importance).

Actions and Accident Causes Involving the Driver*

Excessive speed (failure to make proper allowance for road, road surface, traffic or light condition, etc.)
Driving on wrong side of road
Cutting-in or improper passing
Failing to observe right of way
Failing to exercise proper care at intersection
Failing to make proper allowance in presence of pedestrians
Following other vehicles too closely
Careless backing
Failure to comply with traffic signals or road signs
Failure to indicate change of direction by hand signals
Failure to observe regulations respecting brakes, lights
Failure to maintain vehicle and equipment in safe and proper operating condition
Failure to dim headlights
Braking or swerving without making proper allowance for other traffic
Losing control (driving too fast, skidding, overloading)
Inattention
Aggressiveness
Poor judgment
Excitability
Fatigue
Recklessness (chance-taking)
Discourtesy
Timidity
Impulsiveness
Insobriety
Confusion
Illness
Physical or mental defects
Lack of experience

Actions and Accident Causes Involving Pedestrians:

Crossing roadway without due care
Entering, or alighting from vehicle or street car without due care
Walking or running in front of or from behind vehicle without due care
Playing in street
Walking on wrong side of rural highway
Confused by traffic
Insobriety
Physical or mental infirmity

*About 90 per cent. of the accidents during 1937 resulted from actions or causes included in the foregoing lists.

FIFTY-FIRST ANNUAL REPORT

OF THE

Niagara Parks Commission

1936 and 1937

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 40, 1939

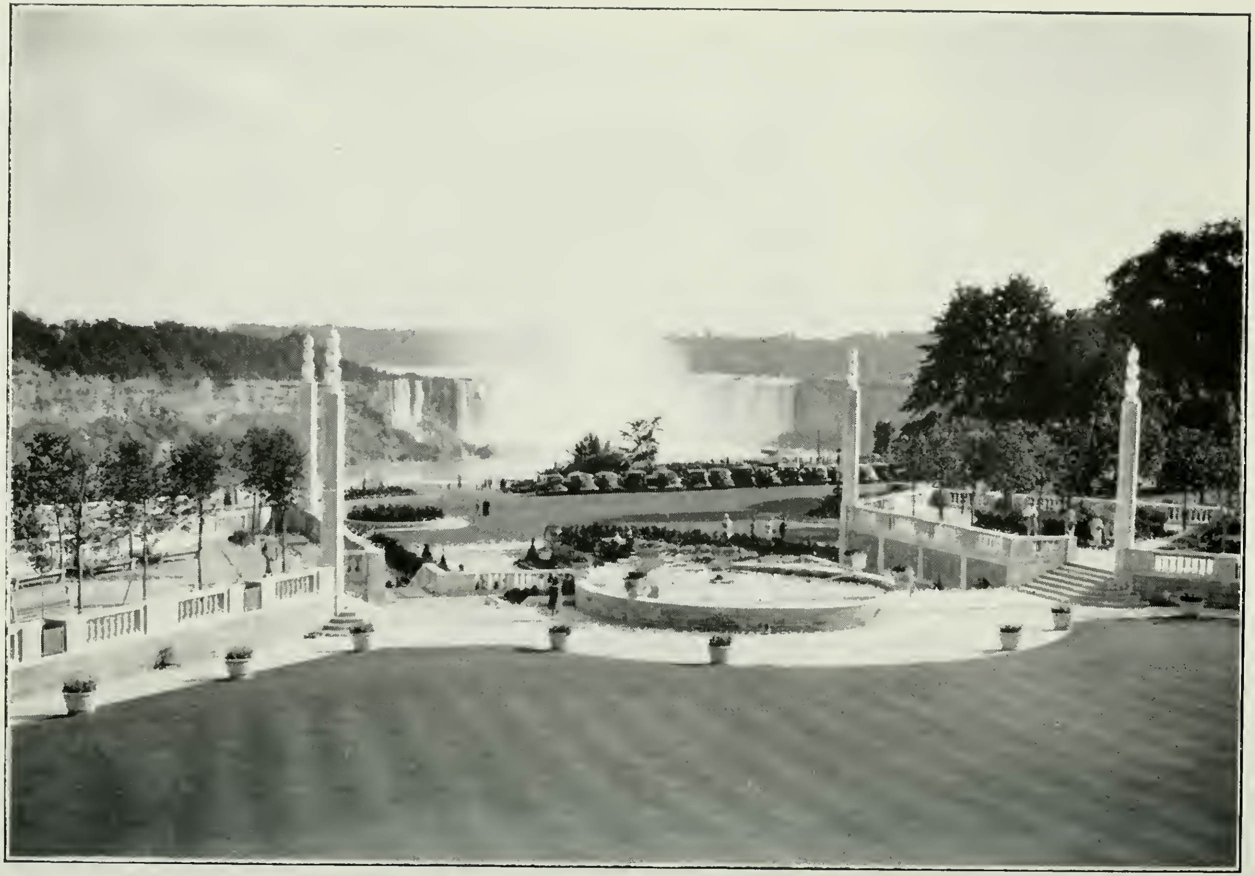
ONTARIO

TORONTO
Printed and Published by T. E. BOWMAN, Printer to the King's Most Excellent Majesty
1938

THE NIAGARA PARKS COMMISSION

HON. T. B. McQUESTEN, K.C., Chairman, Hamilton.
DR. GEORGE B. SNYDER, Vice-Chairman, Niagara Falls.
WM. L. HOUCK, B.S., M.L.A., Chippawa.
JOHN C. M. GERMAN, K.C., Toronto.
ROSS HARSTONE, Hamilton.
A. T. WHITAKER, Brantford.
DONALD McGILLIVRAY, Port Colborne.
ARCHIE J. HAINES, Jordan.

GENERAL MANAGER
C. ELLISON KAUMEYER.



Canadian or Horseshoe Falls from Oakes Garden Theatre

FIFTY-FIRST ANNUAL REPORT

OF THE

NIAGARA PARKS COMMISSION

To The Honourable Herbert A. Bruce, R.A.M.C., M.A., F.R.C.S. (Eng.)
Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

The Niagara Parks Commission begs to submit for the information of the Legislature, the Fifty-first Annual Report, covering the management of the Parks and Parkways under its jurisdiction along the Niagara River during the period from December 1st, 1935, to March 31st, 1936, and thence for the full year from April 1st, 1936, to March 31st, 1937. The extension of time is due to the change-over from the old fiscal year of the Commission, which ended November 30th, to March 31st, to be in keeping with the fiscal year of the Province.

The membership of the Board consists of Hon. T. B. McQuesten, K.C., Minister of Highways and Public Works, Chairman; Dr. G. B. Snyder, Niagara Falls, Vice-Chairman; Wm. L. Houck, B.S., M.L.A., Chippawa; J. C. M. German, K.C., Toronto; Ross Harstone, Hamilton; A. T. Whitaker, Brantford; Donald McGillivray, Port Colborne, and A. J. Haines, Jordan. C. Ellison Kaumeyer, Chippawa, is General Manager and Secretary to the Commission.

There was one change during the year. Mr. Fred W. Beard, who had given much time and attention to his duties, and who had particularly made valuable contribution to the historical data connected with the points under the jurisdiction of the Commission, entered the Public Service, and resigned his post as a Commissioner. Mr. Beard's report on plans and other data in the possession of the Commission, to serve as a groundwork for any future work in connection with these points, was comprehensive.

Mr. A. J. Haines, Jordan, was named to succeed Mr. Beard.

During the year, Mr. N. McCartney, Field and Office Engineer for the Commission, made a trip to Ottawa, and through the courtesy of the Archives Department, the Historic Sites and Monuments Board, and the Department of National Defense, was able to secure for the Commission photostatic copies of plans of Fort Mississauga, Fort George, Fort Erie, Butler's Barracks, and other historic sites within the boundaries of the lands entrusted to the care of the Commission.

Period of Much Development.

The past sixteen months have seen much development on the Niagara Frontier. With the assistance of the Federal and Provincial Government, great improvements have been made in the connecting links between Queen Victoria Park and the Parkway area north of the Whirlpool Rapids. Owing to the taking over of the assets of the International Railway Company, the right of way of the Company's tracks in the City of Niagara Falls, Ontario, came again into control of the Commission, and with the financial assistance of the two governments as mentioned above, this strip has been used to convert the former very narrow and dangerous roadway, with many sharp curves, into a widened highway. A stone wall parapet was erected along the entire strip, a two-step curb fronting on it, and the remaining roadway paved, to give a widened road safe for traffic. In the past there have been numerous accidents because of the steep hills which lead down to the brink of the Niagara Gorge, automobiles being unable to stop because of ice conditions, and some have even gone over the Gorge. With the two-step curb and parapet wall, it will no longer be possible for such to happen, and human life will be saved. Commissioner Harstone prepared a brief for this work and the thanks of the Commission were extended to him.

Improvements were also possible at the Canadian end of the Lower Arch Bridge, which has been beautified. Old buildings which disfigured the bridge approaches have been removed, and the entire area is now a creditable one, quite in keeping with the surroundings.

The pavement was continued at a wider width beyond the Niagara Spanish Aerocar building, and paved parking space provided, eliminating the dust which in the past had been a great nuisance there. The parapet wall was also continued beyond the same area, to a point where there is no possibility of cars leaving the road and plunging into the gorge. Aesthetically it is a great improvement and has received much favourable comment from residents of Niagara Falls, Ontario, and many visitors.

Within Queen Victoria Park, the Mowat Gates were removed from their old location to a point on Clifton Hill. This removed a "bottle neck" which, during rush hours, greatly tied up traffic. Even with the erection of a Memorial Arch on River Road, below the Oakes Garden Theatre, there now is a paved double highway of entry and another for exit. While there will continue to be a "bottle neck" at the Upper Steel Arch Bridge during rush hours, the Commission cannot speed this up and there will be no congestion on Commission property.

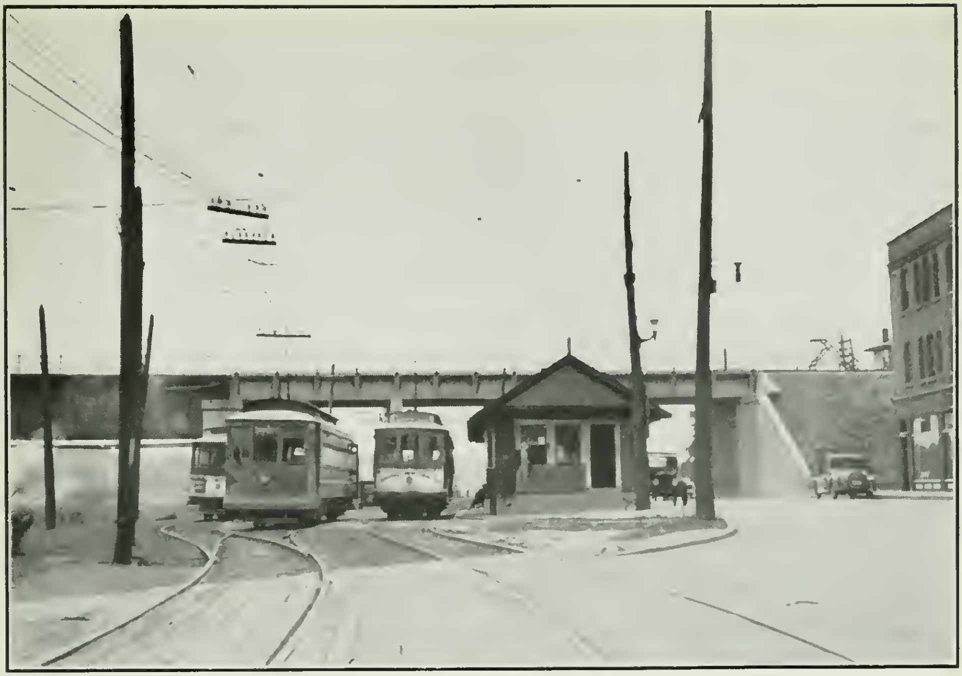
Formal opening of the River Road was carried out on October 10th, in the presence of a large gathering. Hon. T. B. McQuesten, K.C., cut the ribbon and declared the road open to the public.

INFORMATION SERVICE PROVIDED.

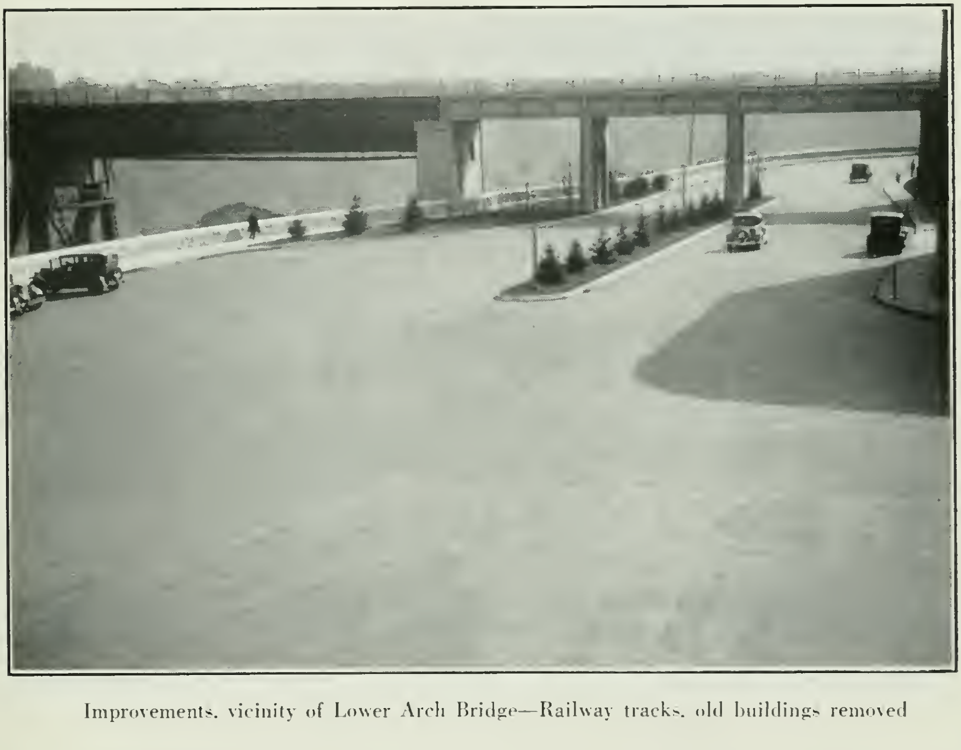
With the construction of a new entirely modern information booth at the head of the Upper Steel Arch Bridge, in keeping with the surroundings, the Commission is in a position to contact United States visitors to Canada as they enter the country, under most favourable conditions. The building was so constructed as to provide a splendid view of the entire Cataract, and will handle souvenirs, be a source of accurate information and call for taxis when needed. The Commission found the taxi nuisance to be still existent, but with removal of such stands from the entire park area and substitution of a call system, it is believed much of the trouble experienced in the past, will be obviated in the future. From this building, too, will be access, at a small charge, to the top of the Memorial Arch in the River Road.

During the year, the arbitration case over the International Railway Company assets within the Niagara Parks Commission territory advanced a further step. The arbitrators' award placed the sum to be paid by the Commission at $179,104.00. The International Railway Company appealed the case, and the Appellate Division of the Supreme Court of Ontario reduced the compensation award by $9,340.00, leaving the sum of $169,764.00 to be paid to the International Railway Company by the Commission.

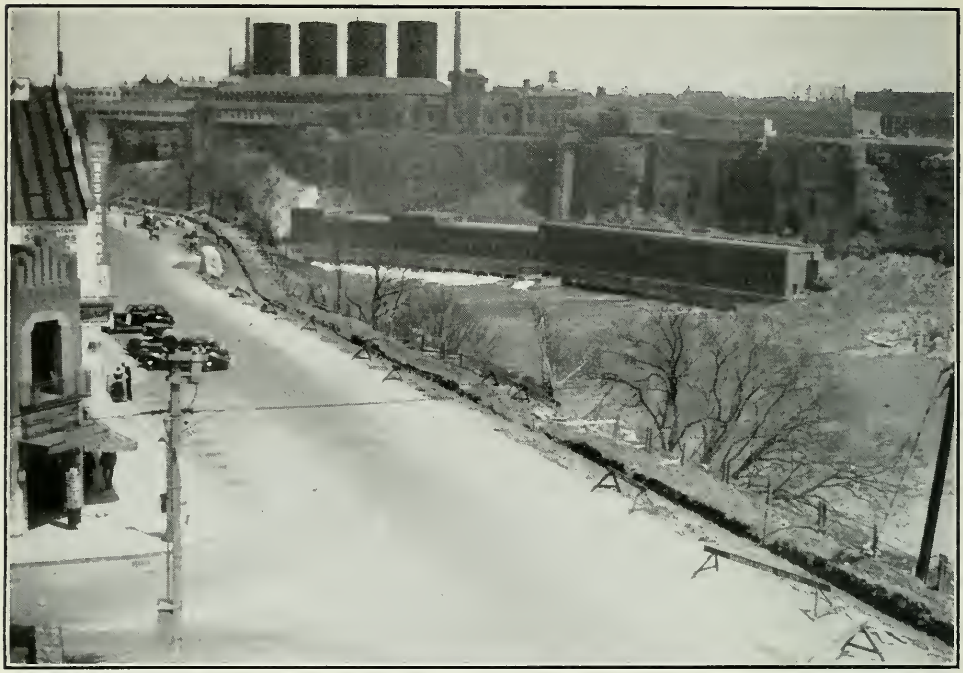
The award and appeal award were highly satisfactory to the Commission and reflected the ability of Mr. A. G. Slaght, K.C., and Mr. F. W. Griffiths, K.C., in



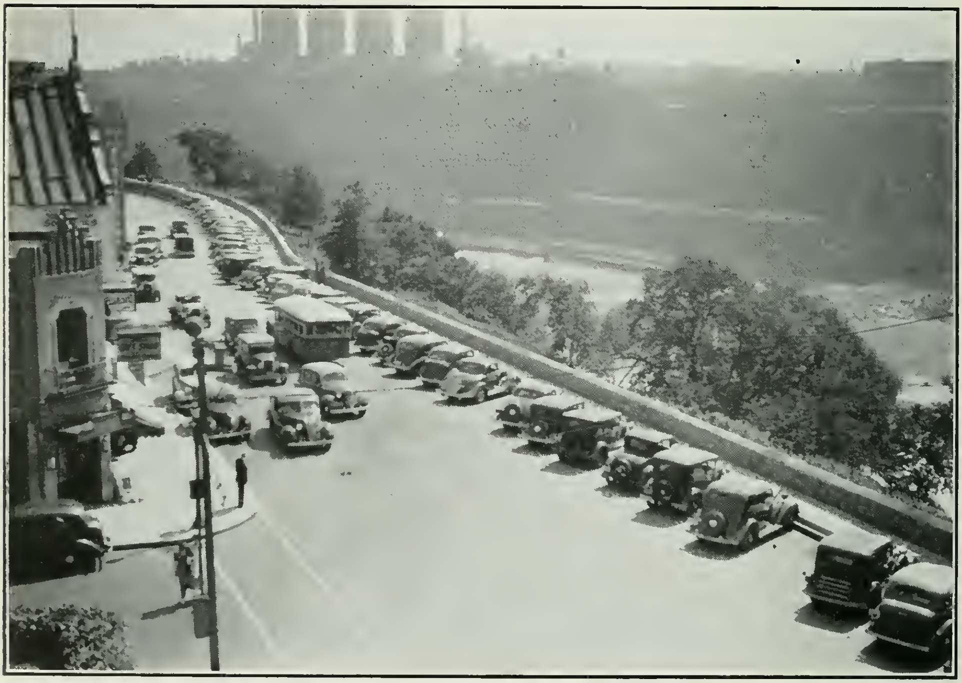
Improvements. vicinity of Lower Arch Bridge—Railway tracks. old buildings. etc.. before removal



Improvements. vicinity of Lower Arch Bridge—Railway tracks. old buildings removed



River Road, vicinity of Falls View Bridge, before widening



River Road, vicinity of Falls View Bridge conducting the case for the Commission. While not within the year of which this is a report, it would not be wise to omit that early in 1937, shortly after the fiscal year of the Commission closed, the Privy Council, to which the International Railway Company had appealed the Appellate Division's judgment, upset it, and awarded the International Railway Company the sum of $1,057,436.00. This came as a great surprise to the Commission, but as there is no higher court of appeal, your Commission can but accept the extraordinarily heavy financial burden thus placed upon it. a burden made even heavier by the fact that the Commission must pay costs of appeal. cross appeal and final appeal. This will cripple the finances of your Commission for some years to come.

William Lyon Mackenzie Building.

The original home of William Lyon Mackenzie at Queenston was reconstructed during the year. from available original drawings and from data relating to construction in that particular period. It is expected that it will be reopened during the present year, Right Honourable William Lyon Mackenzie King, grandson of William Lyon Mackenzie, having consented to be present at the dedication of this recognition of one of the most important figures in the stormy history of the Niagara Frontier. To round out the home site, the Sarah Reynolds Webb property was purchased at a cost of $1,500.00.

In connection with the William Lyon Mackenzie Building, reconstructed during 1936. the General Manager paid a visit to Forest, Ontario, where the original press. which was once contained in the building, is in the possession of Mr. H. E. Pettypiece. Forest Free Press. He placed a valuation of $5.000.00 on it, and as the Commission felt this to be excessive, no action was taken. The Commission would be willing to pay a fair price for this relic of early days on the Niagara Frontier, and hopes to be able, eventually, to replace it in the restored building.

Your Commission hoped, as expressed in its last Annual Report, to be able to reconstruct the greenhouses of the Commission in Queen Victoria Park, whose usefulness has been deteriorating over a period of time, until today it is impossible to use the front entrances. the only entry being through the potting room. This has not been possible because of pressure of other calls, but your Commission is considering removal of the present service yards, which occupy a most valuable section of Queen Victoria Park. to the former International Railway Company power house building. which would enable winter work to be carried on under much more congenial conditions, and in their stead to erect modern greenhouses which would prove a further attraction to visitors, drawing return visits or prolonging the stay of those who had come to visit the Falls and were intrigued with the possibility of study of the greenhouse offerings. The old greenhouses would be available for a time for propagation purposes, but would not be offered as a public attraction. since in that respect they have long outlived their usefulness.

As has been the case for some years, the Commission placed an exhibit at the Royal Winter Fair, but this time included a model of the Oakes Garden Theatre. It created much favourable comment. and the Commission expects that when the real Garden Theatre is opened. which it is expected will be in June, 1937, with His Excellency the Governor-General, Lord Tweedsmuir. officiating, it will prove another drawing card to encourage return visits.

During the year the Robertson Engineering and Construction Company constructed an elevator at the Whirlpool Rapids. in full keeping with the general architectural designs of the Parks System. This will be in operation by June of 1937. Terms reached by the Commission with the Company were most favourable, and it will eventually become an asset of the Commission.

Work is under way on the construction of a Bridle Path, which will eventually extend from Chippawa to Queenston. The generous assistance of Mr. Harry Oakes, former Commissioner and yet longer friend of the Niagara Parks Commission, included furnishing of necessary sand and gravel and a monetary gift of $10,000.00 to assist in the necessary haulage. The Commission expressed their gratitude to Mr. Oakes for his generosity in this and in other matters. The work will be hastened during 1937.

Further work was carried on during the period in the construction of the seawall at Fort Mississauga to protect the Fort and the foreshore. It adds also to the appearance of the grounds, and provided much needed work for the unemployed of Niagara-on-the-Lake.

Arboretum is Under Way

Two plans were submitted by Mr. K. M. Broman, Superintendent of Arboriculture, for an Arboretum. That adopted was on the principle of a golf course layout, but there is no present intention of using the land for a golf course but should, in the future, the desirability for such arise, the layout would need only amplifying, not changing. Much planting has been done on the parkways and talus under Mr. Broman's direction, the nurseries (shrubs and trees) have been replenished and extended, and supplies for future work at a low cost thereby assured.

Mr. Broman has also been responsible for the direction of the work and training of the Apprentice Gardeners taken on in 1936. The plan has proven most successful, and will be extended until there are three classes of eight boys each, serving three years. The boys are a fine type of Canadian citizenship, and on completion of their course, will be valuable material for posts under parks boards and similar bodies requiring Canadian trained gardeners as department heads.

The former souvenir store at Queenston Heights was removed to the Bothy (the old Murray House) and converted into a lecture room for the Apprentices.

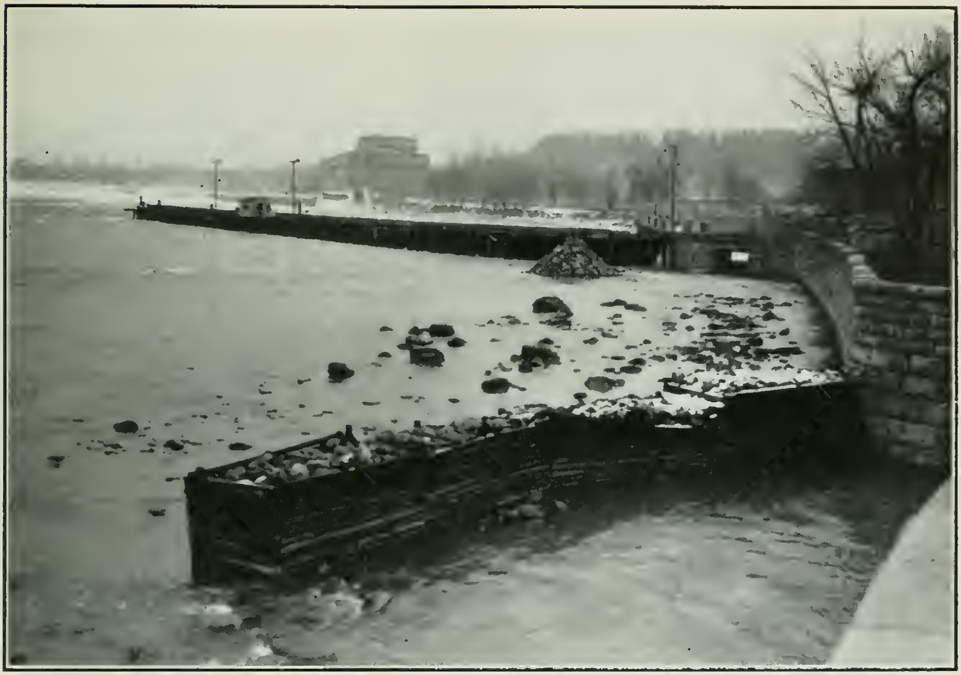
Weir in Niagara River.

Permission was granted to the Canadian Niagara Power Company to construct a gatheringweir at the northern end of the Company's intake. The plans approved by the Commission provided for such form of construction as will turn overflow toward the Canadian shore line above the Falls, covering an area which has had little water flow in recent years. While not a part of the weir system advocated by engineers to preserve the beauty of the Canadian Falls, it is a step to this end. The weir will assure the Company of a steadier head of water, but will not increase the Company's power output of 100,000 horsepower to which its franchise entitles it.

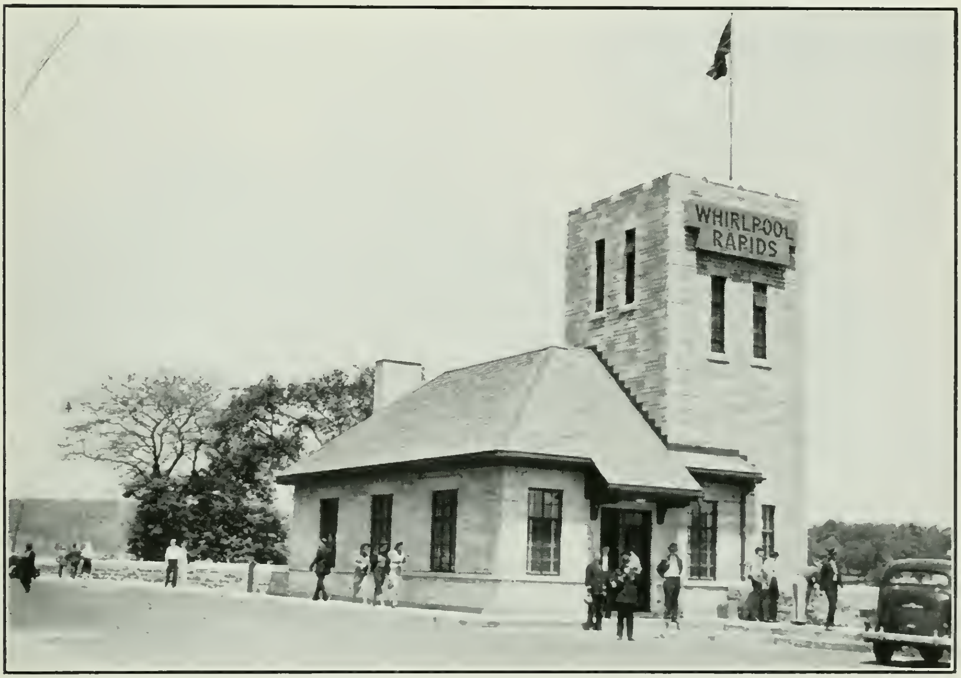
For Round River-Canal Tour.

Preliminary surveys were made following upon the suggestion of Honourable George S. Henry that the Commission acquire a road along Lake Ontario from Niagara-on-the-Lake to Port Weller, and from Fort Erie on Lake Erie to Port Colborne, making a completed drive on the Niagara River for its whole length and on the Welland Canal for the whole length, a distance of 90 miles. Further activity was laid over until work projects under way are completed.

Commissioner W. L. Houck, B.S., M.L.A., was, during the period, appointed by the Hydro-Electric Power Commission of Ontario as its representative on the Niagara Falls Illumination Board. Dr. George B. Snyder, Vice-Chairman of the Commission, and Mr. C. E. Kaumeyer, General Manager, represent the Commission on the Niagara Falls Illumination Board. At the Annual Meeting of that Board, C. Ellison Kaumeyer,



Canadian Niagara Power Co. Weir in Niagara River in the course of construction


WHIRLPOOL
RAPIDS

Entrance to Elevator to Whirlpool Rapids

The Park Restaurant, Balcony Extension

The Bothy, Training School for Apprentice Gardeners

General Manager and Secretary of that Commission, was named the Illumination Board's Secretary-Treasurer and General Manager, without salary.

Commissioner A. T. Whitaker represented the Niagara Parks Commission at the annual joint convention of the American Parks Society and American Institute of Park Executives, and was authorized to tender an invitation to those bodies to meet on the Niagara Frontier in 1937. On his return he submitted a comprehensive report of the convention proceedings, noting that Fort Worth, Texas, was awarded the 1937 convention by a margin of but seven votes over Niagara Falls. The visit and invitation undoubtedly gave valuable publicity to the Niagara Parks, as Commissioner Whitaker was twice given an opportunity to address the Convention.

The roar of the Horseshoe Falls was heard throughout the Empire in the Christmas Broadcast, December 25, 1936. The Canadian Broadcasting Commission placed a microphone in the Cataract Portal of the Scenic Tunnel for the event.

During the early part of 1937, the General Manager, C. Ellison Kaumeyer, visited European and British centres and made direct contacts for goods for sale at Table Rock House, securing exclusive rights for well known products. He also paid a visit to Kew Gardens, London, England, and made arrangements for exchange of Apprentice Gardeners, one of their pupils to come to the Niagara Parks for two years, two Niagara Parks Apprentices to spend a year each at Kew.

The Park Restaurant season proved most successful financially. The need was felt for extension of the Balcony, which is always popular with visitors to the Dining Room, since they are able to enjoy their meal while in the open and in full view of the two divisions of the Cataract. The Commission therefore decided to extend the Balcony Dining Room and this will be ready for the opening of the 1937 season. It is expected to bring considerable more business.

DEATH RECORDED.

Death during the year removed Mr. Harry Swan, janitor of the Administration Building, while on duty on April 10th, 1936, and the Commission by resolution voiced its regret at the death of such a valued and faithful employee. The Chairman, Vice-Chairman and General Manager attended the funeral.

The Maid of the Mist Steamboat Company was granted a five-year lease at the rate of $2,500.00 per annum.

The Board extended the Table Rock House sales service by installation of Canadian and English Blankets, English and Irish China, and Irish Linen. The operations of Table Rock House proved very profitable, as the financial statement appended herewith reveals.

The Members of the Commission, already Sworn in Service to King George V, were, on February 7th, 1936, Sworn in Service to King Edward VIII, and later to King George VI, setting a record in this respect.

The Board was fortunate in being able to purchase the water colour of Niagara Falls by W. F. Friend, (1860), and it is now hanging in the Board Room.

A number of volumes of horticultural works were added to the Commission's Library. It is the Board's intention to create a worthwhile horticultural library by purchasing books as the opportunity offers.

In view of the danger of tragedy, the Commission forbade crossing of the ice bridge formed below the American Falls, and instructed the police to prevent such crossings.

Hog Island, in the Niagara River at the mouth of the Welland River in the Village of Chipawa, has been leased from the Hydro-Electric Power Commission of Ontario for five years at a yearly rental of $25.00.

ENTERTAINMENT.

During the period, the following were entertained by the Commission:

June 16th, 1936	Associated Country Women of the World—Luncheon.
June 23rd, 1936	Party of English School Boys, 16 in number—Luncheon.
August 27th, 1936	Chief Constables' Association of Canada, 300—Dinner.
August 30th, 1936	English Cadets, 15 in number, Scenic Tunnel Trip.
August 30th, 1936	The Lord Mayor of London and party—Dinner with special illumination of the Falls.
August 31st-September 1st, 1936	Honourable B. S. Stevens, Premier of New South Wales, wife and party.
September 14th, 1936	The Ontario Historical Society and the New York State Historical Society—Dinner.
November 23rd, 1936	Canadian Association of Tourist and Publicity Bureaus—Luncheon.

EXPRESSION OF APPRECIATION.

The Commission desires to express its appreciation of the co-operation of the Arnold Arboretum, Boston, Massachusetts, which supplied the Commission with a great number of shrub and tree seeds and cuttings: to the Federal and Provincial Governments for their assistance in aiding the financing of the extensive works projects on the Niagara River frontage; to the Hydro-Electric Power Commission of Ontario for co-operation on many occasions; to the Ontario Department of Highways for assistance in meeting Highway problems; to the Imperial Oil Limited, the Spirella Company of Canada, Mrs. Amelia Mears and Mr. John Mears, and the Rector and Wardens of Christ Church, for the gifts of land owned by them and needed in the widening of the River Road; to A. R. Thompson, M.P., Wankie, Southern Rhodesia, for photographs of Victoria Falls, South Africa, presented by him to Dr. G. B. Snyder, Vice-Chairman, and by Dr. Snyder to the Commission; to Commissioner A. T. Whitaker for the gift of a photograph of the Lord Mayor of London's party, autographed by members of the party, dinner guests and Commissioners; to the Stamford Collegiate-Vocational Institute for the offer of the use of their laboratories and shop for the Apprentice Gardeners, and to the Niagara Falls Collegiate-Vocational Institute for a similar offer: and to Mr. Stewart Fleming, St. Catharines, for several beautiful pictures of Niagara Falls.

All of which is respectfully submitted.

T. B. McQuesten (*Chairman*).
George B. Snyder (*Vice-Chairman*).
Wm. L. Houck.
John C. M. German.
Ross Harstone.
A. T. Whitaker.
Donald McGillivray.
Archie J. Haines.

Niagara Falls, Ontario,
June 1st, 1937.

NIAGARA PARKS COMMISSION

BALANCE SHEET
AS AT MARCH 31st, 1936

ASSETS

CURRENT			
Cash on Hand		$ 1,000 00	
Canadian Bank of Commerce, Niagara Falls			
Chairman's Account	$ 21,954 16		
Less: Current and Payrolls Account	10,633 28		
	$ 11,320 88		
Less: Note	10,000 00		
		1,320 88	
Accounts Receivable, General		30 08	
Accounts Receivable, Water Rentals		43,133 76	
Inventories of Supplies and Souvenirs		6,651 18	
			$ 52,135 90
WATER RENTALS EARNED			156,498 37
RESERVE FUND			
Sinking Fund Provision for Debenture Issues			
Deposit with the Treasury Department of Ontario as at December 1st, 1935		$ 172,567 86	
Accrued Interest thereon		2,300 91	
(Deducted from Debenture Issues)		$ 174,868 77	
Public Liability			
In Guaranteed Investment Certificate of the Toronto General Trusts Corporation			25,994 48
PROPERTY			
Land, Buildings and Improvements, cost	$4,171,963 63		
Less: Reserve for Depreciation	1,047,947 73		
		$3,124,015 90	
Office and Restaurant Equipment, cost	$ 102,651 31		
Less: Reserve for Depreciation	97,188 68		
		5,462 63	
Cars and Trucks, cost	$ 8,504 81		
Less: Reserve for Depreciation	8,024 05		
		480 76	
Miscellaneous Equipment and Tools, cost	$ 27,198 08		
Less: Reserve for Depreciation	26,823 56		
		374 52	
Tableware, Linens and Utensils, cost	$ 29,468 76		
Less: Reserve for Depreciation	25,453 21		
		4,015 55	
			3,134,349 36
DEFERRED			
Payment made by the Commission in 1932 to the City of Niagara Falls in respect to the removal of the City Water-Works from the Park Properties	$ 50,000 00		
Less: Written off	21,666 66		
		$ 28,333 34	
International Railway Company Arbitration, Award, and Legal, Engineering and other costs paid to date, less proceeds of sale of property		223,647 25	
Discount on Debentures	$ 87,820 00		
Less: Written off	34,447 63		
		53,372 37	
Unexpired Insurance		1,684 59	
Inventories of Expense Items		8,689 51	
			315,727 06
			$3,684,705 17

LIABILITIES

CURRENT			
Accounts Payable, General		$ 4.583 06	
Accounts Payable, Award International Railway Company		167.664 00	
			$ 172.247 06
DEBENTURES (Guaranteed by Province of Ontario)			
4% Instalment Gold Debentures, payable 1st December, 1928 to 1947	$2.000.000 00		
Less: Redeemed	620.000 00		
	$1.380.000 00		
Accrued Interest thereon	18.400 00		
		1.398.400 00	
$5\frac{1}{2}$% 15 year Debentures due 1st, August, 1947	$ 300.000 00		
Accrued Interest thereon	2.750 00		
	$ 302.750 00		
Less: Part of $174.868.77 Sinking Fund	52.896 54		
		249.853 46	
$4\frac{1}{2}$% 5 year Debentures due 15th October, 1937	$ 200.000 00		
Accrued Interest thereof	4.125 00		
	$ 204.125 00		
Less: Balance of $174.868.77 Sinking Fund	121.972 23		
		82.152 77	
			1.730.406 23
RESERVE—Public Liability			28.555 39
SURPLUS			
As at December 1st, 1935		$1.606.776 28	
Add: Excess of Revenue over Expenditure for the Period, plus adjustments		146.720 21	
			1.753.496 49

COMMITMENTS

(A) To purchase certain lands.
(B) To complete certain improvements.
(C) To pay pensions of about $75.00 per month.
(D) In respect of the termination of a lease with the International Railway Company.

$3.684.705 17

REVENUE AND EXPENDITURE

FOR THE PERIOD DECEMBER 1st, 1935, TO MARCH 31st, 1936

REVENUE

Water Rentals	$ 245.286 27
Privileges, Tolls and Fees	3.191 61
Interest on Investments	4.415 66
Cash Discounts	261 54
Sundry Revenue	29 45
	$ 253.184 53
Less: Net Cost of Carrying Concessions	3.005 94
NET REVENUE	$ 250.178 59

EXPENDITURE

Maintenance and Upkeep of Parks and Grounds	$ 24,600 15
Salaries and Expenses of Guards and Caretakers	4,537 24
Administration Expenses	7,575 24
Miscellaneous Expenses	1,909 61
City of Niagara Falls re: Water Works — portion written off	1,666 66
Interest on Debentures	26,890 76
Interest on Bank Loans	810 96
Discount on Debentures	1,571 00
American Exchange on funds re Debentures	24
Depreciation on Buildings and Improvements	33,333 33
Interest on Investment for Public Liability	563 19
TOTAL EXPENDITURE	$ 103,458 38
Excess of Revenue over Expenditure	146,720 21
	$ 250,178 59

SCHEDULE 1

SCHEDULE OF LANDS, BUILDINGS AND IMPROVEMENTS

AS AT MARCH 31st, 1936

Lands and Improvements:		
Butler's Burial Ground	$ 5,354 78	
Parkway North (Fort George to Niagara Falls)	983,444 12	
Queenston Heights Park	144,299 92	
Niagara Glen	42,981 17	
Lundy's Lane Burial Ground	6,744 61	
Queen Victoria Park	1,061,402 35	
Parkway South (Queen Victoria Park to Fort Erie)	1,133,711 71	
Fort Erie Park	2,921 70	
Fort Erie, Road across Shipyards	8,266 79	
Fort Erie to Old Fort, Mather Park Fill and Retaining Wall	17,617 90	
Town of Niagara-on-the-Lake—Fort Mississauga Sea Wall	8,561 75	
City of Niagara Falls, Clifton and Hotel Lafayette Sites	16,351 90	
City of Niagara Falls, Road Entrance to Lower Bridge	1,105 16	
City of Niagara Falls, Widening of Roadway and Protective Fence	66 60	
Town of Fort Erie—Fort Erie Retaining Wall	10,440 21	
Queenston to Niagara Falls—Bridle Path	35 35	
		$3,443,306 02
Buildings:		
Queenston Restaurant	$ 18,188 66	
Queenston Souvenir Store	4,754 94	
Queenston Creche	8,173 03	
New Queenston Restaurant—Plans	1,158 00	
Queenston Swimming Pool and Bath Houses—Plans	208 04	
Niagara Glen Inn	23,918 14	
Administration Building	97,392 23	
Park Restaurant	278,922 10	
Table Rock House	287,025 92	
Dufferin Island Refreshment Stand	424 78	
Fort Erie Pavilion	8,491 77	
		728,657 61
TOTAL		$4,171,963 63

SCHEDULE 2

STATEMENT OF NET COST OF CARRYING CONCESSIONS FOR THE PERIOD. DECEMBER 1st, 1935, TO MARCH 31st, 1936

Table Rock House and Lunch Room—			
Supplies used		$ 981 86	
Commissions paid		504 65	
Salaries and other expenses		4,092 62	
		$ 5.579 13	
Less:			
Receipts from Elevator	$ 1.616 75		
Receipts from Souvenirs	1,704 63		
Receipts from Lunch Room	225 57		
		3,546 95	
Net Cost of Carrying			$ 2.032 18
Park Restaurant—			
Supplies used		$ 10 08	
Salaries and other expenses		911 76	
		$ 921 84	
Less: Receipts from Dining Room		6 00	
Net Cost of Carrying			915 84
Niagara Glen Inn—Net Cost of Carrying			31 95
Queenston Restaurant—Net Cost of Carrying			32 28
Clifton Incline—Net Cost of Carrying			19 86
			$ 3,032 11
Brock's Monument—			
Receipts from Tolls and Pamphlet Sales		$ 49 45	
Less: Salaries and other expenses		23 28	
Deduct: Net Revenue			26 17
Total Net Cost of Carrying Concessions			$ 3.005 94

SCHEDULE 3

REVENUE FROM WATER RENTALS IN THE PERIOD FROM DECEMBER 1st, 1935, TO MARCH 31st, 1936 PAID OR DUE

Electrical Development Company:		
August 1st, 1935, to January 31st. 1936.		
Fixed	$ 7.500 00	
Additional	23.154 14	
		$ 30,654 14
Ontario Power Company:		
October 1st. 1935, to March 31st, 1936.		
Fixed	$ 15,000 00	
Additional	43,133 76	
		58,133 76
TOTAL		$ 88.787 90

EARNED

Canadian Niagara Power Company:		
November 1st, 1935 to March 31st, 1936—due May, 1936	$ 28,045 23	
Electrical Development Company:		
February 1st, 1936, to March 31st. 1936—due August, 1936	14,250 09	
Hydro-Electric Power Commission:		
Queenston-Chippawa Development:		
November 1st, 1935, to March 31st, 1936—due October. 1936	114.203 05	
TOTAL		156,498 37
GRAND TOTAL		$ 245.286 27

SCHEDULE 4

REVENUE FROM PRIVILEGES, TOLLS AND FEES IN THE PERIOD FROM DECEMBER 1st, 1935, TO MARCH 31st, 1936

From Niagara Spanish Aero Car Company		$ 875 00
From Maid-of-the-Mist Steamboat Company		625 00
From Bus Companies:		
Gray Coach Lines	$ 553 60	
Highway King Coach Lines Ltd:—Local and Sight-Seeing	884 73	
Sundry	107 48	
		1,545 81
Fees from Lundy's Lane Burial Ground		115 00
Tower Optical Company—Binoculars		30 80
TOTAL		$ 3,191 61

SCHEDULE 5

MAINTENANCE AND UPKEEP OF PARKS, PARKWAYS AND GROUNDS FOR THE PERIOD FROM DECEMBER 1st, 1935, TO MARCH 31st, 1936

Butler's Burial Ground	$ 49 74
Parkway North (Fort George to Queenston)	397 97
Queenston Heights Park	1,090 58
Parkway North (Queenston to Niagara Falls)	2,966 87
Niagara Glen	469 06
Lundy's Lane Burial Ground	316 00
City of Niagara Falls	497 02
Queen Victoria Park	15,908 95
Parkway South (Queen Victoria Park to Fort Erie)	1,505 58
Parkway South (Town of Fort Erie)	24 99
Fort Erie Park	66 24
	$ 23,293 00
Add: Brennan Paving Co., Account for snow ploughing, not yet spread over the above Divisions	1,307 15
TOTAL	$ 24,600 15

SCHEDULE 6

SALARIES AND EXPENSES OF GUARDS AND CARETAKERS FOR THE PERIOD FROM DECEMBER 1st, 1935, TO MARCH 31st, 1936

Butler's Burial Ground	$ 51 20
Fort George to Queenston	200 00
Queenston Heights Park	677 61
Niagara Glen	340 00
Queenston Heights to Niagara Falls	400 00
Lundy's Lane Burial Ground	406 95
Queen Victoria Park	1,784 68
Queen Victoria Park to Fort Erie	600 00
Fort Erie Park	76 80
TOTAL	$ 4,537 24

SCHEDULE 7

ADMINISTRATION EXPENSES
FOR THE PERIOD FROM DECEMBER 1st, 1935, TO MARCH 31st, 1936

Executive and Office Salaries	$ 5.922 80
Office Supplies	335 03
Office Expense	707 69
Travelling Expenses	417 25
Commissioners' Expenses	192 47
TOTAL	$ 7.575 24

SCHEDULE 8

MISCELLANEOUS EXPENSES
FOR THE PERIOD FROM DECEMBER 1st, 1935. TO MARCH 31st. 1936

Insurance	$ 565 65
Advertising	618 90
Pensions	300 00
Exchange on Debenture Coupons and Debentures	10 31
Contribution to Superannuation Fund	414 75
TOTAL	$ 1,909 61

SCHEDULE 9

CAPITAL EXPENDITURE
IN THE PERIOD FROM DECEMBER 1st, 1935, TO MARCH 31st, 1936

Niagara-on-the-Lake—Fort Mississauga Sea Wall	$ 2.533 56
City of Niagara Falls—Clifton and Hotel Lafayette Sites	5.227 77
Town of Fort Erie—Fort Erie Retaining Wall	1,450 71
Queenston to Niagara Falls—Bridle Path	35 35
City of Niagara Falls—Widening of Roadway and Protective Fence	66 60
Queen Victoria Park to Fort Erie—Widening Black Creek Bridge	5 78
TOTAL	$ 9,319 77

NIAGARA PARKS COMMISSION

BALANCE SHEET
AS AT MARCH 31st, 1937

ASSETS

CURRENT			
Cash on Hand		$ 1.550 00	
Accounts Receivable, General		95 82	
Inventories of Supplies and Souvenirs		15.318 91	
			$ 16.964 73
WATER RENTALS, EARNED			27.856 48
RESERVE FUND			
Sinking Fund Provision for Debenture Issues			
Deposit with the Treasury Department of Ontario as at December 1st, 1936		$ 231.374 82	
Accrued Interest thereon		3.085 00	
(Deducted from Debenture Issues)		$ 234.459 82	
PROPERTY			
Land, Buildings and Improvements, cost	$4.638.980 09		
Less: Reserve for Depreciation	1.147.947 73		
		$3.491.032 36	
Office and Restaurant Equipment, cost	$ 104.566 76		
Less: Reserve for Depreciation	100.514 35		
		4.052 41	
Cars and Trucks, cost	$ 11.879 05		
Less: Reserve for Depreciation	8.762 97		
		3.116 08	
Miscellaneous Equipment and Tools, cost	$ 29.749 85		
Less: Reserve for Depreciation	29.120 92		
		628 93	
Tableware, Linens and Utensils, cost	$ 28.511 51		
Less: Reserve for Depreciation	27.780 31		
		731 20	
			3.499.560 98
DEFERRED			
Payment made by the Commission in 1932 to the City of Niagara Falls in respect to the removal of the City Water Works from the Park Properties	$ 50.000 00		
Less: Written off	26.666 66		
		$ 23.333 34	
International Railway Co. Arbitration, Award, and Legal, Engineering and other costs paid to date, less proceeds of sale of property		1.114.289 25	
Discount on Debentures	$ 87.820 00		
Less: Written off	39,162 63		
		48.657 37	
Inventories of Expense Items		5.772 90	
			1.192.052 86
			$4.736.435 05

LIABILITIES

CURRENT		
Canadian Bank of Commerce, Niagara Falls		
Current Account	$ 18.244 38	
Payroll Account	5.299 46	
	$ 23.543 84	
Less: Chairman's Account	4.005 85	
		$ 19.537 99

Accounts Payable			
General	$ 23,060 48		
Award, International Railway Co.	1,057,436 00		
		1,080,496 48	
			$1,100,034 47
DEBENTURES (Guaranteed by Province of Ontario)			
4% Instalment Gold Debentures, payable 1st December, 1928 to 1947	$2,000,000 00		
Less: Redeemed	711,000 00		
	$1,289,000 00		
Accrued Interest thereon	17,186 66		
		$1,306,186 66	
5½% 15 year Debentures due August 1st, 1947	$ 300,000 00		
Accrued Interest thereon	2,750 00		
	$ 302,750 00		
Less: Part of $234,459.82 Sinking Fund	70,170 63		
		232,579 37	
4½% 5 year Debentures due October 15th, 1937	$ 200,000 00		
Accrued Interest thereon	4,125 00		
	$ 204,125 00		
Less: Balance of $234,459.82 Sinking Fund	164,289 19		
		39,835 81	
			1,578,601 84
RESERVE—Public Liability			29,208 61
SURPLUS			
As at April 1st, 1936		$1,753,496 49	
Add: Excess of Revenue over Expenditure for the year		275,093 64	
			2,028,590 13

COMMITMENTS

(A) To purchase certain lands.
(B) To complete certain improvements.
(C) To pay pensions of about $75.00 per month.
(D) In respect of the termination of a lease with the International Railway Company.

$4,736,435 05

REVENUE AND EXPENDITURE FOR YEAR ENDED 31st MARCH, 1937

REVENUE

	YEAR ENDED March 31, 1937	YEAR ENDED November 30, 1935
OPERATING REVENUE OR *LOSS* (before Depreciation):		
Table Rock House	$ 62,618 52	$ 34,940 92
Park Restaurant	4,421 46	1,683 35
Clifton Incline	9,000 97	5,772 99
Queenston Restaurant	648 75	103 67
Niagara Glen Inn	286 62	*10 14*
Brock's Monument	3,072 34	2,744 11
	$ 80,048 66	$ 45,234 90
Less: Depreciation on Equipment and Utensils	7,961 77	10,468 27
NET OPERATING REVENUE	$ 72,086 89	$ 34,766 63
Water Rentals	531,408 43	424,645 94
Privileges, Tolls and Fees	15,832 73	12,239 48
Interest—Bank Deposits	499 18	740 49
Interest—Investments	8,922 27	12,488 64
Cash Discount	1,569 98	527 43
Sundry Revenue	483 29	609 20
TOTAL REVENUE	$ 630,802 77	$ 486,017 81

EXPENDITURE

Maintenance and Upkeep of Parks and Grounds	$ 97,062 59	$ 87,999 02
Salaries and Expenses of Guards and Caretakers	15.664 79	14,182 26
Administration Expenses	25.629 72	24.216 16
Miscellaneous Expenses	17,618 77	8.058 20
Special Grants	8.637 50	10.125 00
Interest on Debentures	79,486 66	84.220 00
Interest on Bank Loans	233 43	4.832 87
Discount on Debentures	4,715 00	4.715 00
American Currency Exchange	416 59	1,381 65
Depreciation on Sundry Tools and Equipment	5,590 86	2,974 54
Depreciation on Buildings and Improvements	100,000 00	100,000 00
Interest on Investment for Public Liability	653 22	1.340 94
TOTAL EXPENDITURE	$ 355,709 13	$ 344,045 64
Excess of Revenue over Expenditure	275,093 64	141,972 17
	$ 630,802 77	$ 486.017 81

SCHEDULE 1

SCHEDULE OF LANDS, BUILDINGS AND IMPROVEMENTS AS AT MARCH 31st, 1937

Lands and Improvements:		
Butler's Burial Ground	$ 5,354 78	
Parkway North (Fort George to Niagara Falls)	983.519 71	
Queenston Heights Park	144,299 92	
Niagara Glen	42,981 17	
Lundy's Lane Burial Ground	6.744 61	
Queen Victoria Park	1,061,402 35	
Parkway South (Q. V. P. to Fort Erie)	1,135,765 44	
Fort Erie Park	2.921 70	
Town of Fort Erie	18.723 02	
Fort Erie to Old Fort	17,617 90	
Town of Niagara-on-the-Lake	8.561 75	
City of Niagara Falls	205,064 62	
Queenston to Niagara Falls	57,166 93	
Fort George to Queenston	1,504 98	
		$3,691.628 88
Buildings:		
Queenston Restaurant	$ 18.188 66	
Queenston Souvenir Store	4,754 94	
Queenston Creche	8.173 03	
New Queenston Restaurant—Plans	1,158 00	
Queenston Swimming Pool and Bath Houses—Plans	208 04	
Lecture Hall for Training School	2,750 99	
Residence for Apprentices	3,462 12	
Niagara Glen Inn	23.918 14	
Administration Building	97,392 23	
Park Restaurant	278.922 10	
Table Rock House	287.025 92	
Dufferin Island Refreshment Stand	424 78	
Fort Erie Pavilion	8.491 77	
Garden Theatre	198.794 00	
Information Building	8.956 90	
Memorial Arch	269 50	
W. L. Mackenzie Building	4.460 09	
		947.351 21
TOTAL		$4,638.980 09

SCHEDULE 2

OPERATING ACCOUNTS
FOR YEAR ENDED 31st MARCH, 1937

	Receipts Sales	Cost of Sales	GROSS PROFIT	
			Amount	% of Cost
Table Rock House and Lunch Room:				
Elevator	$ 52.834 75	$	$ 52,834 75	
Souvenirs	47,695 82	19.855 30	27,840 52	140.20
Linen, Woollens and China	33,103 79	20.705 35	12.398 44	59.87
Lunch Room	2,655 70	1.752 48	903 22	51.56
Confectionery	6,172 04	4.387 25	1.784 79	40.69
Tobacco	1.665 51	1,441 20	224 31	15.57
	$ 144,127 61	$ 48,141 58	$ 95.986 03	
Commissions paid		$ 10,585 50		
Salaries and other expenses		22.782 01		
			33.367 51	
Operating Revenue (before Depreciation)				$ 62.618 52

	Receipts Sales	Cost of Sales	GROSS PROFIT	
			Amount	% of Cost
Park Restaurant:				
Dining Room	$ 37,406 05			
Lunch Room	13.649 81			
	$ 51.055 86	$ 31.493 51	$ 19.562 35	62.12
Confectionery	1,345 45	1,152 98	192 47	16.70
Tobacco	1,412 75	1,197 99	214 76	17.93
	$ 53,814 06	$ 33.844 48	$ 19.969 58	
Salaries and other expenses			15.548 12	
Operating Revenue (before Depreciation)				$ 4,421 46

	Receipts Sales	Cost of Sales	GROSS PROFIT	
			Amount	% of Cost
Clifton Incline:				
Railway	$ 2.234 85	$	$ 2,234 85	
Souvenirs	16.296 82	6,912 35	9,384 47	135.80
Miscellaneous	1.582 59	1,188 66	393 93	33.13
	$ 20,114 26	$ 8,101 01	$ 12,013 25	
Commission paid		137 50		
Salaries and other expenses		2,874 78		
			3.012 28	
Operating Revenue (before Depreciation				$ 9.000 97

	Receipts Sales	Cost of Sales	GROSS PROFIT	
			Amount	% of Cost
Queenston Restaurant:				
Dining Room	$ 3,461 10			
Miscellaneous Sales	7.632 91			
	$ 11,094 01	$ 7.186 68	$ 3,907 33	54.37
Piano Rental	10 00		10 00	
	$ 11,104 01	$ 7.186 68	$ 3,917 33	
Salaries and other expenses			3.268 58	
Operating Revenue (before Depreciation)				$ 648 75

	Receipts Sales	Cost of Sales	GROSS PROFIT Amount	GROSS PROFIT % of Cost
Niagara Glen Inn:				
Dining Room	$ 2.176 82	$ 1.478 71	$ 698 11	47.21
Souvenirs	453 32	230 69	222 63	96.41
	$ 2.630 14	$ 1.709 40	$ 920 74	
Salaries and other expenses			634 12	
Operating Revenue (before Depreciation)				$ 286 62
Brock's Monument:				
Gross Receipts from Tolls and Pamphlet Sales			$ 3.793 85	
Salaries and other expenses			721 51	
Net Operating Revenue				$ 3.072 34

SCHEDULE 3

REVENUE FROM WATER RENTALS FOR YEAR ENDED 31st MARCH, 1937

	YEAR ENDED March 31, 1937	YEAR ENDED November 30, 1935
From Canadian Niagara Power Company:		
Fixed	$ 15.000 00	$ 15.000 00
Additional	52.170 12	51.821 29
	$ 67.170 12	$ 66.821 29
From Ontario Power Company:		
Fixed	$ 30.000 00	$ 30.000 00
Additional	86.203 04	83.113 05
	$ 116.203 04	$ 113.113 05
From Electrical Development Company:		
Fixed	$ 15.000 00	$ 15.000 00
Additional	65.630 29	6.756 00
	$ 80.630 29	$ 21.756 00
From Hydro-Electric Power Commission	$ 267.404 98	$ 222.955 60
TOTAL	$ 531.408 43	$ 424.645 94

SCHEDULE 4

REVENUE FROM PRIVILEGES TOLLS AND FEES FOR YEAR ENDED 31st MARCH, 1937

	YEAR ENDED March 31. 1937	YEAR ENDED November 30, 1935
From Niagara Spanish Aero Car Company	$ 3.500 00	$ 3.500 00
From Maid-of-the-Mist Steamboat Company	2.500 00	1.200 00
Fees from Lundy's Lane Burial Ground	393 00	248 00
Tower Optical Company—Binoculars	2.024 90	1.305 34
	$ 8.417 90	$ 6.253 34

From Bus Companies:		
Van Dyke—Sight-Seeing	$ 790 73	$ 374 17
International Bus Corporation	68 59	134 00
Gray Coach Lines	1,694 70	1,700 63
Highway King Coach Lines Ltd.	4,725 97	3,656 22
Sundry	134 84	121 12
	$ 7,414 83	$ 5,986 14
TOTAL	$ 15,832 73	$ 12,239 48

SCHEDULE 5

MAINTENANCE AND UPKEEP OF PARKS PARKWAYS AND GROUNDS FOR YEAR ENDED 31st MARCH, 1937

	YEAR ENDED	
	March 31, 1937	November 30, 1935
Butler's Burial Ground	$ 735 38	$ 607 99
Town of Niagara-on-the-Lake	41 04	122 08
Queenston Heights Park	8,369 88	6,181 76
Queenston to Niagara Falls	10,441 01	4,954 56
Niagara Glen	2,672 98	3,351 11
City of Niagara Falls	1,919 19	1,490 58
Lundy's Lane Burial Ground	1,712 48	2,202 45
Queen Victoria Park	55,181 27	53,481 19
Queen Victoria Park to Fort Erie	10,160 69	8,889 49
Town of Fort Erie	1,603 74	591 14
Fort Erie Park	1,218 39	1,427 15
Fort George to Queenston	3,006 54	4,699 52
TOTAL	$ 97,062 59	$ 87,999 02

SCHEDULE 6

SALARIES AND EXPENSES OF GUARDS AND CARETAKERS FOR YEAR ENDED 31st MARCH, 1937

Butler's Burial Ground	$ 89 60	$ 82 00
Fort George to Queenston	611 00	631 56
Queenston Heights Park	1,613 22	1,857 84
Niagara Glen	1,058 34	1,084 24
Queenston to Niagara Falls	1,211 00	1,210 76
Lundy's Lane Burial Ground	1,288 76	1,230 49
Queen Victoria Park	7,203 86	5,926 08
Queen Victoria Park to Fort Erie	1,800 00	1,934 89
Fort Erie Park	278 60	224 40
City of Niagara Falls	510 41	
TOTAL	$ 15,664 79	$ 14,182 26

SCHEDULE 7

ADMINISTRATION EXPENSES FOR YEAR ENDED 31st MARCH, 1937

Executive and Office Salaries	$ 19,294 80	$ 18,682 84
Office Supplies	1,012 27	1,084 94
Office Expense	1,828 28	1,499 25
Travelling Expenses	2,080 66	1,112 35
Commissioners' Expenses	1,413 71	1,836 78
TOTAL	$ 25,629 72	$ 24,216 16

SCHEDULE 8

MISCELLANEOUS EXPENSES
FOR YEAR ENDED 31st MARCH, 1937

	YEAR ENDED March 31, 1937	YEAR ENDED November 30, 1935
Insurance	$ 2.022 36	$ 2.367 43
Advertising	7.344 86	3.936 11
Pensions	900 00	900 00
Entertainment		472 89
Professional Services	3.248 85	*36 00*
Exchange on Bond Coupons and Bonds	80 44	121 82
Contribution to Superannuation Fund	3.945 26	295 95
Sundry	77 00	
TOTAL	$ 17.618 77	$ 8,058 20

SCHEDULE 9

GRANTS AND SPECIAL CHARGES
FOR YEAR ENDED 31st MARCH, 1937

Stoney Creek Battleground—Grant	$ 800 00	$ 800 00
Niagara Falls General Hospital—Grant		200 00
Board of Illumination	2.812 50	3.000 00
City of Niagara Falls re: Water Works—portion written off	5,000 00	5.000 00
Falls View Hose Company—Grant		50 00
Niagara Historical Society—Grant		50 00
Percy L. Walker—Compensation		1.000 00
Niagara Falls Vocational School	25 00	25 00
TOTAL	$ 8.637 50	$ 10.125 00

SCHEDULE 10

CAPITAL EXPENDITURE
FOR YEAR ENDED 31st MARCH, 1937

Fort George to Niagara Falls:		
Fort Mississauga Sea Wall	$ 65 22	
Town of Niagara, Restoration of Forts	10 37	
		$ 75 59
Fort George to Queenston:		
Lands	$ 1.504 98	
Resoration of W. L. Mackenzie Building	4.460 09	
		5.965 07
Queenston to Niagara Falls:		
Bridle Path	$ 2.956 41	
Lands	623 18	
Widening of Roadway	42.364 91	
Nursery	10.062 38	
Driveway to Nursery	379 56	
Lecture Hall for Training School	2.750 99	
Residence for Apprentices	3.462 12	
Electric Pole Line	745 14	
		63.344 69
City of Niagara Falls:		
Widening Roadway and Protective Fence	$ 203.362 13	
Lands	530 73	
Garden Theatre	182.442 10	
Information Building	8.956 90	
Memorial Arch	269 50	
		395.561 36
Queen Victoria Park to Fort Erie:		
Widening Black Creek Bridge	$ 1.692 47	
Widening Usher's Creek Bridge	361 26	
		2.053 73

Town of Fort Erie:	
Retaining Wall	16 02
TOTAL	$ 467.016 46

SCHEDULE 11

STATEMENTS OF APPLICATION OF FUNDS, WORKING CAPITAL AND GROSS PROFITS FOR YEAR ENDED 31st MARCH, 1937

FUNDS PROVIDED

Gross Profits for the Year	$ 398.483 69
Sold Guaranteed Investment Certificate of the Toronto General Trusts Corporation	25.994 48
Sale of certain property in re International Ry. Co.	130 00
Decrease in Working Capital (See Statement Below)	205.216 33
	$ 629.824 50

FUNDS EXPENDED

Additions to Lands, Buildings and Improvements	$ 467,016 46
Additions to Office, Restaurant and other Equipment	11.216 99
Reduction of Debenture indebtedness	150,591 05
Paid in re International Ry. Co., Arbitration	1.000 00
	$ 629.824 50

WORKING CAPITAL

ASSETS

	YEAR ENDED	
	March 31, 1936	March 31, 1937
Cash on Hand	$ 1.000 00	$ 1.550 00
Net Bank Balance	1,320 88	
Accounts Receivable, General	30 08	95 82
Accounts Receivable, Water Rentals	43,133 76	
Inventories of Supplies and Souvenirs	6,651 18	15.318 91
Water Rentals Earned	156.498 37	27.856 48
Unexpired Insurance	1,684 59	
Inventories of Expense Items	8.689 51	5.772 90
	$ 219.008 37	$ 50.594 11

LIABILITIES

Net Bank Overdraft		$ 19,537 99
Accounts Payable	$ 4,583 06	23.060 48
Accrued Interest on Debentures	25,275 00	24.061 66
	$ 29.858 06	$ 66.660 13
Working Capital	189.150 31	*16,066 02*
	$ 219.008 37	$ 50.594 11

Working Capital as at March 31st, 1936	$ 189.150 31
Deficit as at March 31st, 1937	16.066 02
Decrease in Working Capital (See above)	$ 205.216 33

GROSS PROFITS

Provision for Depreciation on Lands, Buildings and Improvements	$ 100.000 00
Provision for Depreciation and Wastage on Office, Restaurant and Other Equipment	13,021 83
Written off a payment of $50,000 made to the City of Niagara Falls in 1932 for removal of Water Works ($23.333.34 still to be written off)	5.000 00
Written off Discount on Debentures	4.715 00
Added to Reserve for Public Liability	653 22
Net Profit Added to Surplus	275.093 64
	$ 398.483 69

Ontario Research Foundation

REPORT

For the Year 1938

Presented by the Chairman
to the Lieutenant-Governor in Council
December, 1938

* * *

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 48, 1939

ONTARIO

TORONTO:
Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty
1939

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April 17th, 1939.

THE HONOURABLE MITCHELL F. HEPBURN, M.P.P.,
Prime Minister of Ontario,
Parliament Buildings, Toronto.

DEAR SIR:

The Foundation has sustained a heavy loss in the recent death of Sir Joseph Flavelle, Bart., who has been Chairman since it was established. His great talents have been an important factor in bringing us to our present status. Therefore, in reporting on the activities for 1938, I am covering a period throughout which the late Sir Joseph Flavelle was Chairman.

In spite of the uncertainties and anxieties of the year which has passed, I am pleased to report that the finances of the Foundation as set out in the Financial Statement are in a healthy condition. As in previous years expenditures have been kept within the income derived from investments and for services performed on behalf of industry.

The report of the Director to me describing in greater detail the work performed in the various laboratories is evidence of sustained activity and gradual expansion in the service being rendered to industry and agriculture. I sincerely hope that an ever-increasing use will be made by industry of this opportunity presented to them by the original subscribers, the support and sustained interest of the Government, and the loyal service of our scientific staff.

I have the honour to be,

Your obedient servant,

E. HOLT GURNEY,

Chairman.

REPORT OF THE DIRECTOR OF RESEARCH, 1938

To E. Holt Gurney, Esq.,
Chairman

Dear Sir:

I beg to present to you the annual statement of the Director concerning the work carried out during the year 1938.

Before proceeding to outline the work performed in the several divisions of the Foundation, I should like to make one or two observations concerning the institution as a whole.

The fabric and equipment have been maintained in good condition, and as shown in the attached financial statements, adequate provision has been made for both maintenance and renewal.

During the past year, our chief item of capital expenditure has been a complete overhaul of the furnace facilities of the metallurgical division, and the addition of several new furnaces. This division is now equipped to carry out all the standard methods of heat treatment both for experimental work and special commercial work. It is our hope that these changes will not only give our staff valuable and necessary experience in this important field, but that the outside work will bring the Foundation into closer contact with a large number of companies operating in the metallurgical field.

Research work of any significance from a commercial standpoint requires many years before anything tangible can be expected. A low average for the laboratory stages may be put at three years. Then there follow from two to three years of patent and development work which may lead to its abandonment for legal or economic reasons. This Foundation has been in existence now for a sufficient length of time for some of the projects started years ago to be bearing fruit, and I am pleased to report that the immediate future is full of promise.

In spite of the general recession of business activity during the past year, 645 investigations were performed for 244 firms as compared with 549 investigations for 190 firms in 1937.

The agricultural research programme of the Foundation was formulated and commenced almost ten years ago. It is fundamental in character and a long-term undertaking. Its value is not so apparent in good times, but we feel that the results already obtained will become increasingly valuable to workers in this field, as the need for a reconsideration of our agricultural economy within the Province becomes more pressing. This is not a problem only for agricultural specialists, but the fact that rural Ontario has been and is declining in population, and during the past ten years in purchasing power, must be the concern of those engaged in industry.

I should like to express our sense of gratitude to the Provincial and Federal Departments of Government, the Colleges associated with the Department of Agriculture, the University, the National Research Council and, not least, to many institutions in the United States for assistance in our work. In a very real sense scientific research to-day seems to be leading the way towards a peaceful and co-operative spirit which knows no boundaries.

AGRICULTURE

Staff: Mr. Jarvis, Mr. Chapman, Dr. Skey

As in previous years, the main work of this Department has had to do with a study of the environmental character, chiefly soil, climate and economic conditions, of the various sections of Ontario, and the performance of certain varieties of crops under these specified conditions. In this programme, the work of defining the natural environment must precede the studies on crops; and it seems best to proceed in this manner not only because of our own crop studies, but also in order that this basic information may be made available to other workers in agricultural science in the Province. To illustrate this point, it is only necessary for me to mention the many requests received during the past few months for copies of an article on the climate of Southern Ontario, which was prepared by our staff and published in a technical journal last April. We are particularly interested in the use being made of this article by the Ontario Experimental Union, whose function it is to test newly developed varieties of crops under the diverse conditions found throughout the Province. The experimental results now obtained by this Union are related to climatic and soil zones, something that was not possible formerly because of the lack of basic information.

Having completed a physiographic and general soil survey of the central part of Southern Ontario, it was decided to extend this type of survey eastward to the Quebec border. During the past summer, the eastern counties, including Renfrew County—comprising an area of nearly 4,000,000 acres—were covered from the standpoint of physiography. The resulting information has been organized, charted and discussed, and will shortly be made available to teachers and investigators in this field. Having thus become familiar with the topographic form, geological origin, depth to the bedrock, and the characteristics of the materials on which the soils have been formed, it is expected that a general account will be completed during the coming year.

The most significant points brought out by this survey to date are as follows: Comparing the glacial till of Eastern and Central Ontario, there is some till in Glengarry and Stormont Counties consisting largely of Trenton limestone, which is similar to that of Peterborough County; but apart from this, the materials overlying the bedrocks are generally dissimilar. The Eastern Ontario drift consists more largely of materials brought from the Laurentian uplands, and contains less limestone than that of Central Ontario. The obvious result of this is the more acid soil, and other soil characteristics will, in due course, be correlated with the geological material.

The most interesting physiographic features of the region are the abandoned channels of the Ottawa River. East of the city of Ottawa, stream-cut terraces, edged by abrupt bluffs, are conspicuous features of the landscape, these being sometimes over 50 feet in depth, and in places over three miles in width.

During the past year, considerable time was devoted to the detailed study of the economic conditions in the rural section of Southern Ontario, the object being to accumulate and analyze sufficient data to give an accurate picture of the distribution and changes, within recent years, of major factors affecting agricultural development. It is hoped that the knowledge of the distribution of these economic factors, combined with that of the physical factors, will provide for a sub-division of the Province into agricultural regions. Only on the basis of such knowledge will it be possible to formulate long term public and private policies for the improvement of agriculture in this Province.

Some of the most potent factors affecting the economic life of any region are the distribution and changes in population which are taking place. A study of these factors, begun last year, is nearing completion. In addition, the percentage of improved land on a township basis, has been charted for the last three census years, namely, 1911, 1921 and 1931.

During the year, information has been obtained in regard to dairying in other dairy regions of the world, notably in New Zealand and Denmark, in order to effect a comparison between conditions in these countries and in Ontario. Special attention was focussed on Eastern Ontario as a dairy region, and a further study will be made of the relationship between the economics of production and the physical and economic environment.

A previous report told of a study of apple production in the various parts of the Province. The general relationships between the performance of certain varieties and climatic and soil conditions encountered in the apple-growing sections of the Province, have been determined. Lately, through the courtesy of the Manager of the Norfolk Fruit Growers' Co-operative, we have obtained that Company's records of the yields from a large number of Norfolk orchards for a period of three years. With these records of yield and quality in hand, it is planned to intensify the investigation so that the correlation between environment and performance may be established in quantitative rather than general terms.

PATHOLOGY AND BACTERIOLOGY

Staff: Dr. Hadwen, Dr. Gwatkin, Dr. Fallis

Work in this Department has continued along much the same lines as in former years.

The widespread prevalence of bovine mastitis and the seriousness of the disease has been reported previously. The studies by the two senior members of the staff on methods of diagnosis and their comparative value indicate those which may be usefully employed in trying to prevent the disease. These methods are intended for the detection of mastitis before clinical manifestations are evident. Once the disease has become acute, or shows clinical symptoms, the laboratory diagnosis is then necessary only to determine the cause. The work dealing with the microscopic method for detecting mastitis and distinguishing between the different types of the disease, together with a comparison with other methods, is being prepared for publication.

Although diagnostic methods may be used in trying to prevent mastitis, its eradication depends on the solution of problems connected with the disease. If eradication or even control is to be realized, it would seem to place the following demands on those actively concerned:—(1) utilization of available information to detect the presence of the disease; (2) widespread co-operation between farmers, veterinarians and laboratories in applying this information. The latter involves: (a) active efforts by those concerned to prevent the spread of the disease in herds where it is known to be established; (b) experimental research to discover the predisposing causes of the disease, its mode of spread, knowledge concerning the focus of infection and the functioning of a normal udder; and (c) active support of experimental work for all those concerned.

The ideal solution of the problem would seem to be the prevention of the disease rather than the cure. The tendency has been to breed mainly for milk production, and in many cases slight thought has been given to breeding for health. Naturally, the increased milk production will place a greater strain on the animal, thereby increasing the possibility of infection and at the same time decreasing the chances of effective treatment. This again points to the need for the adoption of preventive measures.

Attention has been increasingly focussed during the past years on the prevention of human infection by pasteurization of milk. As milk is one of our important primary products, it will be obvious that it should be of as high a quality as possible before pasteurization. This necessitates clean milk obtained from healthy animals.

Experimental work was continued during the year on *Brucella abortus*. Guinea pigs were protected against infection by intraperitoneal injections of fresh, unpreserved, anti-abortus rabbit serum, thus confirming results of previous experiments. These results are available in a published paper.

A suspected outbreak of equine encephalomyelitis occurred in the Niagara district in late summer and early autumn. Dr. McGilvray, Principal, Ontario Veterinary College, asked us to co-operate with members of his staff in an investigation of the epidemic. There were at least twenty-five cases of the disease in this one district. Twelve of these occurred between September 12th and October 5th, nine of which were fatal.

Attempts to reproduce the disease experimentally by inoculation of either guinea pigs or horses with blood and tissues from the fatal cases were all negative. Histo-pathological studies were made on various organs from six of the fatal cases. One of the most constant features noted in this study was necrosis of the liver, suggesting some toxic condition. No lesions were discovered which would suggest encephalomyelitis. It was concluded that the disease was similar to one which has occurred in the west, causing degeneration of the liver, with jaundice, and producing lesions in the alimentary canal and pharynx. The primary cause of the disease either in the west or here is unknown.

This problem indicates once more the inadequacy of our knowledge concerning animal disease and the necessity for further research.

Studies relating to the sheep nose fly *Oestrus ovis* were continued. Five hundred and ninety-three lambs, of all ages up to about one year, were examined. Over 39 per cent. of these were infected with larvae of this fly. This figure would be much higher if spring lambs, which had not yet been exposed to infection, had not been included in the total. Two, and perhaps three, generations of flies may be produced in one year. The flies, reared from larvae obtained from the sinuses of different lambs, lived from ten to twenty-eight days in captivity. The larvae appear to develop more rapidly in summer than in winter. Experiments are planned to try to determine the cause of this retarded development. Morphological differences between the three larval stages have been noted and have been illustrated by photomicrographs. There is apparently a high mortality of the larvae between the first and second stages. As many as sixty larvae have been found in a single animal, but the average is well below this figure.

Studies on the parasites of game and fish were continued, in co-operation with the Ontario Fisheries Research Laboratory and the Department of Lands and Forests. These were concerned especially with the parasites of deer and in particular the life history of the throat-bot fly, the larvae of which are parasitic in the retro-pharyngeal recess of deer. Parasites of various fish-eating birds were studied to discover if they were the definite hosts for certain fish parasites, and at the same time experiments were carried out with a view to discovering the definite host for the fluke parasite *Neascus* encysted in the black bass in some of our nothern lakes. A black duck was harbouring a blood parasite *Haemoproteus*, a protozoan organism closely related to pathogenic forms, although it has not been established that this parasite is fatal.

Members of the staff have continued to co-operate with the Department of Game and Fisheries in the diagnosis of diseases of wild life. One of the interesting findings this year was the occurrence of lead poisoning in ducks. This is caused by the ducks swallowing lead pellets which they pick up when feeding in shallow bays which have been extensively shot over. The birds exhibit symptoms analogous to those seen in mammals, becoming partially paralyzed and unable to fly. The condition has been observed in the United States, but this is our first knowledge of its existence in Ontario.

TEXTILES

Staff: DR. GOODINGS, DR. MCKAY, MR. STAPLES, MR. TURL

As in my former reports I propose to discuss the work of this Department under the following headings: testing, control work, minor investigations and research. In all sections the past year has been one of gratifying development and progress.

The physical equipment, due to increased pressure of work from outside, has been added to, notably by the addition of our constant-temperature-humidity room in which the physical testing of textile materials is largely conducted, and also research work.

During the early part of the year a special Bulletin was prepared by the staff describing the facilities of the laboratories for testing and research in the textile field. Its circulation among those engaged in the industries has had some effect, and we hope during the coming year to continue this educational work. With the keen competition now existing between the countries producing textiles, and the rapidity of technological development in every branch, it is only by co-operation between these industries in Canada and all scientific and technical facilities available that prosperity can be maintained. As you will see in the later sections of this report there are welcome signs of initiative; the old policy of waiting for development to come from without is dying, and I feel confident that our laboratories can and will play an important role in building up Canadian industries which are technically as well as financially self-sustaining.

The testing work of the Department has continued to increase in volume. In connection with no other industry can it be said with more truth that testing lies at the very root of good manufacturing. Sometimes we are asked why the Foundation is doing this work. The chief reason is because it is badly needed, and constitutes at present a primary duty and responsibility. It is also necessary to point out that machines do not make the tests and above all do not supply the essential matter, namely, the interpretation of figures. The past ten years have convinced me that what the friends of the Department ask for, pay for and receive is the report which almost always accompanies the results of tests. With longer experience and a larger staff this condition will become more widely established. During the coming year we hope to enlarge this branch of our work in order to make it more self-sustaining. At present the infrequency of certain tests makes the work either prohibitive in cost to the manufacturer or a source of expense to the Foundation.

During the past year the Department has conducted an interesting experiment by entering into an agreement with one of the largest companies in the industry to carry out necessary testing and to advise concerning chemical control. All the chemicals used in the various wet processes have been tested from time to time and evaluated in terms of cost and the needs of the industry. Owing to the opportunity afforded to study factory operations in relation to cost as well as technical detail, the experience has been of great value to my colleagues. I am also able to report that those in charge of the plants feel that the work has been justified by the results.

The larger responsibility resting on the Department in control work is in connection with the production and sale of Quality Control rayon merchandise. Started some years ago and at that time restricted to knitted fabrics, the Plan has not only become firmly established in this field, but it has recently been extended to cover a wide range of dress materials and other types of woven fabric. This steady growth has been accompanied by closer co-operation between various branches of the industry and ourselves, and it is equally gratifying to report that there is not merely the intention but an increasing capacity on the part of the industry to adhere strictly to the specifications which have been drawn up by our staff and agreed upon.

The specifications for the knit goods' field have been brought up to date in the light of experience and in harmony with changes in style and therefore demand. Needless to say the preparation of specifications for the wider field to suit Canadian conditions has necessitated a long period of trials in the plants and frequent modifications. The work has been worth while apart from the success of the Quality Control Plan. Several manufacturers have expressed their appreciation for the results obtained from such joint investigations in that they have been made aware for the first time of hindrances to the making of better products. Apart from specifications, which can never reach perfection, the final test of a fabric is its behaviour under normal conditions of wear. What are the factors which influence wear? What is their relative importance? How far do laboratory tests reproduce these factors qualitatively and quantitatively? These are questions which change what may appear to be, and can be made to be, a routine affair into a prolonged and involved investigation. An illustration of our problems is shown by the simple statement that there is no satisfactory wear-testing machine available at the present time. The best that is available will give results which may assist an experienced and not too dogmatic observer.

During the year, thirteen manufacturers of woven fabrics and forty-six manufacturers and wholesale merchants of garments have co-operated with the laboratory in Quality Control work.

To illustrate the research work which has been associated with the Plan, I should like to refer briefly to several problems and the progress which has been made:

(a) What causes a fabric to fray? Can this tendency be measured quantitatively and consistently? A machine has been designed and built which at present shows great promise. The essential feature is that standard samples of fabric are mounted at the top of a vertical rod and then made to move backward and forward at high speed through an 8-inch arc. Fraying is caused principally by the rapid change in the direction of movement, and large differences are observed in the amount of fraying shown by various fabrics under these controlled conditions.

(b) The climate of Canada during the summer months especially requires a high degree of fastness to light in the dyestuffs used in the industry. This calls for test work in advance of manufacturing on a large scale to assure conformity with standards. During the past year we have compared again the degree of fading produced by sunlight and in the standard machine used for accelerated tests. We find that an exposure of 40 hours duration in the machine is approximately equivalent to a month's exposure to normal daylight.

In spite of the increased pressure of outside work I am happy to be able to report that it has been possible to continue with a minimum of interruption several lines of research concerned with basic scientific and technological problems in the textile industries. To these I shall refer briefly.

Progress in the laboratory work and patent work associated with the development of an oil which is mainly composed of mineral oil has continued and we are looking forward to successful commercial development in the near future.

During the year, owing to developments abroad, there has been a marked increase in the interest shown by our manufacturers in processes which reduce the shrinkability of wool. Yarn is now being produced in other countries which has this desirable quality, and we are now pressing on with our own research work. We have every hope that in the near future we shall be ready for plant trials of comparable yarns treated and made by the process developed here.

With the support of the Dominion Silk Mills, Toronto, a study has been started of the scientific principles involved in the 'soaking' operation of natural silk, the first stage in manufacturing operations. The success of this operation is vital to subsequent processing and a good product. It is almost a virgin field of research, and we hope at least to develop a clearer understanding of the important factors involved.

To provide a scientific background for the technological research work carried out in the laboratories involving natural silk, a commencement has been made on the study of the fundamental physical characteristics of single fibres. During recent years great emphasis has been placed on the chemical composition of silk, largely due to the increased interest in the chemistry of proteins, but the physical side of the subject has been neglected. At present we are mainly concerned with the quantitative study of the strain characteristics of single fibres under stress, and the relationship between stress, time and strain. It has been clearly shown that the total deformation under stress is made up of (a) an immediate extension, (b) a slower extension, and (c) an irreversible plastic flow.

ENGINEERING AND METALLURGY

Staff: Mr. Ellis, Mr. Tasker, Dr. Goodier, Mr. Cavanagh, Mr. Jackson

The work of this Department during the past year may be considered under four headings: the testing, inspection and heat treatment of engineering materials, the investigation for different individuals or organizations of minor unrelated problems of an engineering or metallurgical character, the protracted exploration on behalf of one or two manufacturers of a few fields of engineering or metallurgical interest, and inquiries initiated by members of the Department and constituting what might be called fundamental research work.

During the year the variety of work and the number of new clients increased. By augmenting our facilities for heat treatment of metals and alloys, we have increased our contact with manufacturers throughout the Province, and are now undertaking a wider variety of this type of work than ever before. It is hoped that those attracted to the Foundation by our routine services in testing, inspection and heat treatment, will in due course visualize the value of research as applied to their individual problems of manufacture and of commercial progress.

The augmented and improved facilities for the investigation of problems associated with air conditioning were put to considerable use during the year, such pieces of equipment as radiators, grilles, humidifiers, ceiling outlets, refrigerators and blower units being investigated in this laboratory. By the end of the year, it had become obvious that an increasing demand was likely to be made for work of this type.

Of minor unrelated problems of an engineering or metallurgical character were three quite independent investigations of defects which developed in large machine parts before or during service, two independent investigations of defects in small forgings, an inquiry into the cause of failure of a metal chair, another into the breakage of a rubber roll, numerous tests on apparatus for heating, ventilating and air conditioning, the calibration of instruments for use in mechanical testing by manufacturers in the Province, noise measurements of household appliances and, for one organization, the manufacture of a number of melts of a new hard alloy.

Work was continued for the third successive year on metallurgical problems for Dominion Wheel and Foundries, Limited, who have been in the forefront in availing themselves of the special functions of this Department. For several months the entire service of one man was devoted to the solution of an interesting problem of heat treatment for Massey-Harris Company, Limited, another organization which has used the Department considerably during the past. A lengthy investigation of the resistance of metals to abrasion has been carried out for Canada Foundries and Forgings, Limited. Work on powder metallurgy has occupied the attention of one of the staff continuously since last May. So far, however, no company has taken the important step of supporting a full-time worker (Fellow) for a definite period of time, *e. g.*, a year. This method of financing and prosecuting research work, the Fellowship method, which has proved of such value in the United States and at the Foundation, has yet to attract engineering organizations in this Province. What the unremitting labours of one individual can accomplish in a specified time, in such an organization as the Foundation, remains to be fully appreciated by that group of manufacturers in the Province in response to whose direct request this Department was created. It is to be hoped that the successful lead set by other Departments, Chemistry and Textiles, will soon be followed in this Department.

Research initiated within the Department has continued on a number of problems. Dr. Goodier, who left us to take up a Professorship at Cornell University, prosecuted his studies in elasticity until his departure. It is worthy of record that, while at the Foundation, 1932-1938, he contributed fifteen important original notes and papers largely on subjects related to the theory of elasticity. His going has deprived the Province of a research worker of high order in a field of growing importance to the engineer and metallurgist.

The study of the resistance of metals and alloys to abrasion and wear was interfered with somewhat by the pressure of other investigations. However, such progress was maintained that, by the end of the year, the hypothesis regarding the principal causes of wear, referred to in the last annual report, was sufficiently substantiated to allow a new programme of work to be prepared, based on theories developed as a result of the earlier investigations. The forthcoming year should witness the completion of this programme and the publication of our findings, which, it is believed, will prove of considerable value to users of metals and alloys, who are concerned with their resistance to wear.

Towards the end of the year, the results of the tests on the creep of fusible metals were collated, and publication of these results is contemplated during the forthcoming months. The work on the influence of the direction of rolling on the mechanical properties of steel strip was also completed. The results of this investigation were published under the title "The Effects of Fibre on the Notch Toughness of Mild Steel as Influenced by the Cooling Rate."

The design of the oscilloscope, which had been found of such value in the separation of parts made of ferrous materials, and which was mentioned in the last report, was altered during the year. An improved model was purchased by one of the steel companies in the Province, and an instrument embodying yet other improvements is available, at the Foundation, to manufacturers in the Province for the purpose of separating iron and steel parts which have, inadvertently, become mixed, or of keeping purchased material between specified limits.

This Department is responsible for the building of such special machines as are required in the other departments of the Foundation, and, during the year, a number of interesting items have been built. In this connection, reference may be made to a fray tester constructed in accordance with designs submitted by the Department of Textiles, a simple stiffness tester, and a small impact testing machine for plastics, which were designed and built for the Chemistry Department, and improvements and additions to a tanning mill developed for the Department of Biochemistry.

CHEMISTRY

Staff: DR. WESTMAN, MR. SCHIERHOLTZ, DR. MARSHALL, MR. LEE, MR. MACHATTIE, MR. PATRICK

A review of the activities of this Department again reveals a steady increase in research work done for outside firms, the year 1938 showing a 25 per cent increase in short term investigations, and a 50 per cent increase in long term investigations over 1937. The increase in the work performed on a fellowship basis is particularly gratifying, since this arrangement undoubtedly permits the most efficient co-operation between a manufacturer and the Foundation. The manufacturer benefits from the accumulated knowledge and experience which come from continued research in one field, the Foundation can make its plans regarding finances and staff with more assurance, and a more fundamental approach to the problems of the industry is possible.

During the year, a considerable amount of experience has been gained in the application in industry of ideas developed in the laboratory. In connection with short term investigations, little difficulty is usually encountered; the problem is immediate and pressing, the solution lies within present manufacturing technique and equipment. With long term investigations, however, the situation is usually the reverse; the problems investigated are fundamental and the solutions reached necessarily more novel in character, requiring considerable changes in technique and equipment. With problems of long standing, too, it frequently happens that a number of essentially different solutions appear almost simultaneously, and the verdict of industry is based on considerations which could not have been foreseen in the laboratory.

The short term investigations of this Department are, as usual, concerned with a wide variety of subjects, but it is interesting to note how frequently, during the past year, they have involved a study of packaging problems. This field is rapidly increasing in complexity as more and more new materials are developed in an effort to provide protection against humidity, odours, sunlight, moulds and bacteria.

As in 1937, the laboratory devoted to ceramics and non-metallic minerals was fully occupied with external problems for which financial support was furnished by the manufacturer concerned. A more detailed report on the production of slag wool was prepared, the possibility of producing grey brick by other than coating methods was investigated, and a study of roofing tile glazes was carried to the point where the first plant burn was made. The object of this last investigation is to increase the range of colours and textures available in tile made from Canadian raw materials, which, because of their low maturing temperature, present a problem of unusual difficulty.

The damage caused by the crystallization of soluble salts in masonry has been the subject of several reports from this Foundation. An interesting case investigated during the year revealed the crystallization of almost pure sodium sulphate in sufficient quantity to endanger the stability of the wall of the building concerned.

The gas laboratory, which is supported by the Consumers' Gas Company of Toronto, has, over a period of years, made a study of stoppages in mains, services and appliances. This study has shown the desirability of keeping the naphthalene content of the gas below a certain low value, and indicated how this might be done in the plant. At first, the capital cost of the additional equipment required, proved a serious difficulty, but finally the operating staff, to whom full credit is due, evolved a plan for using reserve equipment without in any way interfering with its normal function. As a result, the gas now leaving the plant has a naphthalene content well below the maximum set by the laboratory.

It is interesting to note that the progress of this investigation frequently depends on the accurate determination of almost vanishing quantities of the minor constituents in a gas. Thus, carbon monoxide has been determined in concentrations of twenty parts per million, and nitric oxide at a concentration of one part in twenty-five million.

In connection with the problem of making industrial hydrogen from city gas, a pilot plant was designed, constructed and operated in the laboratory during the year. Some eight runs were made, entailing the production of 10,000 cubic feet of hydrogen. A commercially practicable efficiency was reached, but difficulty with impurities necessitated further fundamental studies.

Mr. Maconachie, who has been in charge of this laboratory since its inception in 1930, left during the year to help with the construction, and take charge of the operation, of the new gas plant in Owen Sound. His training at the Foundation and in the plant of the Consumers' Gas Company peculiarly fitted him for taking responsible charge of a process essentially different from any previously operated in Canada.

In the paint and varnish laboratory, the investigation of paint failures begun some years ago, continues to yield information essential to an understanding of the problem of protective finishes. An increasing number of manufacturers are asking for tests of their products and investigations of failures in the field.

A fundamental investigation of the processing of drying oils was in progress during the year, and will be carried to the point where the effect of the processing conditions on the weathering properties of the final paint film will be determined. Need for scientific information of this kind was shown by the difficulties encountered by a manufacturer in changing from a small, uninsulated kettle to a large, insulated one to which the empirical knowledge, based on plant experience, was not applicable. The Goodier viscosimeter, developed in the Foundation, is being used to good advantage in these studies.

The laboratory devoted to a study of waxed paper and related products, which is supported by the Appleford Paper Products Company of Hamilton, has been busy investigating the host of new wrapping and waxing materials which have appeared in recent years. Paper, formerly the only wrapping material, must now compete with films made from such diverse materials as cellulose, rubber, casein, rubber-hydrochloride, cellulose acetate, synthetic protein and bentonite. A similar diversity of materials is now available for waxing paper. Packaging concerns are asking for more resistance to moisture, grease, etc., and greater transparency and heat-sealing ability. One package developed in the laboratory for merchandising an aqueous solution, was required by specification to lose less than 10 per cent. of water in a year.

While the ideal, inexpensive wrapping tissue has as yet not materialized, a better understanding of the problem has been reached, and some properties of the experimental papers improved beyond those commercially available. The manufacturing difficulties involved in the production of an improved milk bottle cap, developed in this laboratory, are now being investigated in the plant.

In the cellulose and plastics laboratory, satisfactory progress has been made with several fundamental investigations, although it has been necessary to interrupt this work on various occasions to help in the initial stages of establishing a new fellowship, or to ensure continuity of progress in fellowships where a change of staff occurred.

Service tests of a double pane window unit developed the previous year, have been continued. One unit shows decided promise in that one year's weathering has produced no noticeable change in appearance. Its construction is such that it cannot be distinguished from an ordinary single pane unit except on close examination. Its efficiency in preventing the escape of heat and the formation of condensation or frost during severe weather, was demonstrated on several occasions this winter.

A low-cost, plastic moulding powder, prepared from wood meal, which was developed in 1937, was tried in the plant and found to lack certain properties essential to commercial success. Further work has practically overcome these difficulties, and a low-cost powder is now available which can be moulded commercially. The new product does not exhibit quite the same flow and flexibility as the more expensive powders, and, after moulding, is about 40 per cent lower in impact strength. An effort is being made to use this powder where these properties are not important, and where a low-cost material is required. In the meantime, further laboratory research will be undertaken to find whether more improvement is possible.

A number of organic liquids such as styrene, when heated in the presence of catalysts, gradually change from a thin, mobile and reactive liquid to a solid material which is infusible and quite non-reactive. This process, which is the basis for the development of most of our modern plastic materials, is known as polymerization, and involves the linking together of the molecules of the liquid to form long chains. In recent years, an amplification of this process has been developed in which a small proportion of a second organic chemical is used to form cross links between the chains, thus resulting in a still more inert and insoluble material. This latter process, known as cross-polymerization, has been studied in the cellulose and plastics laboratory, and a new series of cross-polymers have been produced which are notable in their resistance to swelling in commercial solvents.

Other work undertaken by this laboratory during the year, included the initiation of a fellowship supported by the William Wrigley Junior Company for the study of coating methods, packaging problems, etc.; the synthesis of a number of mono- and di-glycerides in connection with the development of a synthetic textile oil by the Textile Division; and several studies of casein glue.

A new departure during 1938 was the establishment of an analytical laboratory in the Division, to serve as a central laboratory in the Foundation to which analytical problems could be referred. This laboratory has been well equipped, and every effort made to set and maintain a high standard of accuracy. Special attention has been given to the analysis of metals and alloys, not only because of the number of requests for analyses originating in our Division of Engineering and Metallurgy, but because the increasing complexity of the alloys used in industry involves serious analytical difficulties which provide a useful field for research in new methods. Another consideration was the shortage in Canada of highly skilled analysts capable of dealing with modern alloys, which was revealed by the crisis of last September.

The paper, printing and adhesives laboratory has worked principally with packaging and adhesive problems, mainly centred around difficulties due to odours and moisture, although some progress has been made in studying printing inks and printing processes, in particular, the factors governing the rate of drying of ink.

One interesting printing problem investigated was the smearing of the ink on lithographed labels as they were applied to containers by operatives in the plant. This smearing occurred in a very sporadic fashion and was difficult to reproduce in the laboratory. It was finally discovered that there was a critical moisture content for the labelling paste at which smearing occurred readily. Under certain conditions in the plant, paste on the labeller's fingers reached this critical moisture content and smearing occurred.

In conjunction with the Division of Engineering and Metallurgy, a number of corrosion problems were investigated during the year. In practically every case, they illustrated the need of a complete understanding of all factors involved in a specific situation before satisfactory progress can be made in solving a corrosion problem.

BIOCHEMISTRY

Staff: Dr. Barbour, Mr. Henry, Mr. Lemon, Mr. Evans

During the major part of the year my colleague Dr. Barbour was incapacitated by sickness, and I regret to report his passing away in February, 1939. For ten years he rendered devoted and effective service to this Foundation, and his boundless enthusiasm and scientific skill were largely responsible for the development of our laboratories concerned with industrial research based on the biological sciences.

Within the year the Foundation was granted patents in Canada and the United States covering the process, developed by Dr. Barbour, for the preparation of fish oils free from objectionable odour and taste and containing substantially their original content of vitamins A and D. At the present time negotiations are being carried out with companies in Canada and the United States which may lead to the early development of the process on a commercial scale. We have continued to explore the factors which control the speed of the reaction and lead to the retention of vitamins. It has also been proved experimentally that by the use of cod-liver oil which has been treated to form a semi-plastic substance and which can be added to normal vegetable shortening used in baking, loaves can be made containing vitamins A and D. Having regard to the place which bread occupies in the diet of a large section of our people, this offers a cheap and effective way of removing the danger of deficiency diseases, especially during the winter months.

The services of the Department have been used by an increasing number of manufacturers for the determination of the various vitamins in foodstuffs and other products. As a result of this demand the facilities of the laboratory have been enlarged, and we anticipate still further advances in research and routine service. At the end of the year we were commencing work in collaboration with a Toronto company in an effort to produce a loaf containing vitamin B^1 and other nutritional factors. The importance of this vitamin has been brought into greater prominence owing to recent findings in nutritional laboratories. At the present time we are investigating the various methods used for both the biological and chemical methods for the assay of B^1. These and other investigations have necessitated improvements in our own baking laboratory, and several months have been devoted to the development of standard methods for the baking of bread and a variety of cakes.

Throughout the year work on the production of lactic acid and other chemicals by the action of microorganisms was conducted on behalf of the Beamish Sugar Refineries Limited. It is gratifying to report that since August lactic acid has been produced by the Company on a commercial scale, and that by the end of the year the plant as a whole was operating economically and satisfactorily. It is also of interest that this undertaking represents another Canadian industry which has become established as a direct result of research performed in these laboratories.

During the year pilot-scale tannery operations have continued for the purpose of improving the vegetable-chrome process for the production of sole and belting leather which we developed in 1937. We had already established that it is possible to produce a satisfactory combination tanned sole leather in from one-third to one-half the time required by standard methods. Our product had the serious disadvantage, however, that it had a finished colour which runs counter to the prevailing fashion among leather users.

In addition to attempting to change and improve the colour of our leather we also hope to improve still further its durability under normal wearing conditions. Chrome leather is more resistant to wear than vegetable tanned leather, and the essential problem is to take advantage of this fact and still preserve an attractive piece of finished leather.

A machine developed by the Bureau of Standards, Washington, for measuring the wearing properties of sole leather has been used to study the variation of this quality in vegetable tanned leathers now being marketed in Ontario. These figures have provided a standard with which to measure the wear-resistance of our own leather.

A white deposit frequently appears on finished leather and is generally spoken of as 'spew.' This is one of the most acute problems of the industry, and we are frequently called upon to assist tanners in their efforts to determine the causes and cure of one or other of the many varieties of 'spew.' It is a problem which is not confined to Canada or to this continent, and although a great deal of research has been done the literature on the subject is not large and contains conflicting views concerning the essential facts. At the present time we know of no way of producing 'spew' artificially and consistently. We are now endeavouring to solve this preliminary part of the large problem with the hope that by such means the key to its prevention in industry may be discovered. The nature of the 'spew' is usually determined by the character of the oils and greases in the finished leather.

A complete report covering the technology and economics of pectin production was prepared for one of the large apple growers of the Province. By laboratory experimentation samples of a satisfactory product were made from waste apple pomace. This investigation is another example of the contribution of the Foundation to the elimination of waste and the creation of productive industry.

A commencement has been made in the formulation and production of a mixture of biological products which can be used in the making of cakes and biscuits, There is every hope that its use will result in better products and lower costs.

All of which is respectfully submitted.

Faithfully yours,

H. B. SPEAKMAN,
Director.

Appendix A

ADVISORY COUNCIL

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Vice-Chairman: E. Holt Gurney, Esq.

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Thomas Bradshaw, Esq	President, North American Life Assurance Co., Toronto.
H. H. Champ, Esq	Vice-President, The Steel Company of Canada, Ltd., Hamilton, Ont.
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Louis Lang, Esq	President, Lang Tanning Co., Ltd., Kitchener, Ontario.
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George McLaughlin, Esq	Box 235, Oshawa, Ontario.
J. Stanley McLean, Esq	President, Canada Packers, Limited, Toronto.
Humfrey Michell, Esq., M.A	Professor of Political Economy, McMaster University, Hamilton, Ontario.
W. Lash Miller, Esq., B.A., Ph.D	Professor Emeritus of Physical Chemistry, University of Toronto.
Paul J. Myler, Esq	President, Canadian Westinghouse Co. Ltd., Hamilton, Ontario.
T.A. Russell, Esq., LL.D	President, Massey-Harris Co., Ltd., Toronto.

Appendix B

ONTARIO RESEARCH FOUNDATION STAFF

1938

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Librarian—Miss Maynard Grange
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Research Fellow—P. E. Cavanagh, B.A.Sc. (Tor.)
Research Fellow—J. E. Coombs, B.A. (Tor.)
Research Fellow—W. R. Jackson, B.A.Sc. (Tor.)
Instrument Maker—L. Trodd

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Research Fellow—H. B. Marshall, M.A. (U.B.C.), Ph.D. (McGill)
Research Fellow—J. E. Lee, B.A. (Wes.)
Research Fellow—I. J. W. MacHattie, M.A. (Tor.)
Research Fellow—K. Patrick, M.A.Sc. (Tor.) A.I.C.

TEXTILES

Director—A. C. Goodings, M.Sc., Ph.D. (Leeds) F.T.I.
Secretary—Miss Ruth Mackenzie
Research Fellow—R. W. McKay, M.A., Ph.D. (Tor.)
Research Fellow—M. L. Staples, M.A. (Tor.)
Research Fellow—L. H. Turl, B.A. (Tor.)

PATHOLOGY AND BACTERIOLOGY

Director—Seymour Hadwen, D.V.Sci. (McGill), F.R.S.C.
Research Fellow—Ronald Gwatkin, V.S., D.V.Sc.
Research Fellow—A. M. Fallis, M.A., Ph.D. (Tor.)
Animal Keeper—J. E. Pritchard

BIOCHEMISTRY

Director—A. D. Barbour, B.A.Sc., M.A., Ph.D. (Tor.)
Secretary—Miss Suzette Troop
Research Fellow—W. C. Henry, B.A. (Tor.)
Research Fellow—H. W. Lemon, M.A. (Tor.)
Research Fellow—E. V. Evans, M.A. (Wes.)

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Research Fellow—T. D. Jarvis, B.S.A. (Tor.)
Research Fellow—B. P. Skey, A.E. (Prague), M.S.A., Ph.D. (Tor.)
Research Fellow—L. J. Chapman, B.S.A. (Tor.)

Appendix C

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*A limited number of those reprints marked with an asterisk are still available and may be obtained on application to the Librarian.

Appendix D

Exhibit "A"

ONTARIO RESEARCH FOUNDATION

BALANCE SHEET

As at December 31, 1938

ASSETS

Cash in Bank and on Hand:			
In The Canadian Bank of Commerce:			
Trust Bank Account	$ 69,152.51		
Operating Bank Account	8,352.48		
		$ 77,504.99	
Petty Cash		42.38	
			$ 77,547.37
Investments:			
Bonds (at cost):			
Canadian Trustee Bonds	$2,566,998.64		
Canadian Public Utility Bonds	241,414.64		
Miscellaneous Bonds	257,025.08		
Total Bonds	$3,065,438.36		
Accrued Interest thereon to December 31, 1938	39,745.49		
		$3,105,183.85	
Stocks, valued at the lower of cost or market at December 31, 1938		494,447.92	
Total Investments			$3,599,631.77
Accounts Receivable		$ 6,294.15	
Less: Reserve		990.62	
			5,303.53
Stores and Containers			7,482.48
Advances			100.00
Prepaid Insurance			436.02
Fixed Assets (being those owned by Ontario Research Foundation):			
Structural Additions and Alterations		$23,439.80	
Apparatus and Instruments		37,500.72	
Office Furniture and Fixtures		3,054.64	
Library		22,877.37	
			86,872.53
			$3,777,373.70

LIABILITIES, RESERVES AND SURPLUS

Accounts Payable			$ 815.45
Reserves:			
Reserve for Income Stabilization		$ 315,000.00	
Reserves for Replacement of Equipment:			
Structural Additions and Alterations	$ 22,873.15		
Apparatus and Instruments	56,339.49		
Office Furniture and Fixtures	5,437.15		
Library	11,624.80		
		96,274.59	
Total Reserves			411,274.59
Surplus:			
Subscriptions Paid			3,363,100.00
Income Surplus per Exhibit "B"			2,183.66
			$3,777,373.70

Signed on behalf of Ontario Research Foundation:

Ralph Skelton,
Secretary-Treasurer.

I have audited the books and accounts of Ontario Research Foundation for the year ended December 31, 1938, and I have received all the information and explanations I have required and I certify that, in my opinion, and subject to my report, the above Balance Sheet is a true and correct view of the affairs of Ontario Research Foundation as at December 31, 1938, according to the information and explanations given me and as shown by the books.

All my requirements as auditor have been complied with

Toronto, January 20, 1939.

Elliott Allen,
Of Allen, Miles & Fox,

Chartered Accountants.

EXHIBIT "B"

ONTARIO RESEARCH FOUNDATION

INCOME AND EXPENDITURE ACCOUNT

YEAR ENDED DECEMBER 31, 1938

INCOME:				
Balance at January 1, 1938			$ 4,093.26	
BOND INTEREST:				
Received for year	$103,295.63			
Received (arrears)	4,955.66			
Accrued	39,745.49			
		$147,996.78		
Dividends on Stocks		34,121.00		
Bank Interest		672.39		
Researches for Industrial Corporations		41,686.98		
Royalties Received		361.85		
Discount taken		86.32		
Sterling Exchange		627.01		
U. S. Exchange		185.81		
			225,738.14	
				$229,831.40
EXPENDITURE:				
Salaries:				
Laboratory Salaries	$101,640.44			
Other Salaries	28,423.00			
		130,063.44		
Laboratory Expense:				
Chemicals	$ 1,591.03			
Apparatus	6,072.22			
Other Supplies	6,447.08			
Travelling	4,415.22			
Sundry	4,356.94			
		22,882.49		
General Expense:				
Bank Charges	$ 139.20			
Extension Work	3,630.19			
Fuel	1,324.73			
Gas and Water	980.08			
General Expense	5,729.40			
Insurance	770.00			
Light and Power	1,833.08			
Office Expense	1,122.86			

Postage and Excise	$ 411.25			
Patent Expense	565.37			
Repairs and Alterations to Buildings	1,402.73			
Staff Annuity Account	2,262.22			
Telephone and Telegraph	1,192.02			
Transfer Taxes	72.00			
Travelling	194.04			
		$ 21,629.17		
			$174,575.10	
Depreciation:				
On Structural Additions and Alterations		$ 3,123.96		
On Apparatus and Instruments		8,516.02		
On Furniture and Fixtures		686.89		
On Library		2,052.41		
			14,379.28	
Transferred to Reserve for Income Stabilization			31,376.89	
Transferred to Reserve for loss in market value of stocks			7,316.47	
				$227,647.74
INCOME SURPLUS AT DECEMBER 31, 1938				$ 2,183.66

Annual Report

UPON THE

Prisons and Reformatories

OF THE

PROVINCE OF ONTARIO

BEING FOR THE YEAR ENDING 31st MARCH

1939

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 53, 1939

ONTARIO

TORONTO
Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty
1939

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To The Honourable Albert Matthews,
Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

The undersigned has the honour to present the Annual Report upon the Prisons and Reformatories of the Province of Ontario for the year ending 31st March, 1939.

Respectfully submitted,

H. C. NIXON,
Minister.

HONOURABLE HARRY CORWIN NIXON,
Provincial Secretary of Ontario.

SIR:

The most apparent fact of interest in the reports herewith presented concerning the Reformatories and Prisons of Ontario for the year which ended March 31, 1939, is another all-time high in the number of persons committed and the number sentenced to prison.

Year ending September 30th	Approximate population of Ontario.	Persons Committed for Trial	Persons Sentenced to Prison
1913	2,767,000	19,250	11,897
1914	2,770,000	22,777	14,801
1915	2,788,000	20,337	12,663
1916	2,728,000	16,100	9,364
1917	2,750,000	12,445	7,867
1918	2,769,000	13,242	7,874
1919	2,821,000	13,096	7,904
1920	2,849,000	14,756	8,643
1921	2,934,000	16,800	9,790
1922	3,101,000	14,800	9,312
1923	3,035,000	13,995	8,036
1924	3,075,000	15,879	8,834
1925	3,115,000	18,023	11,306
1926	3,151,000	18,033	11,371
1927	3,176,000	20,578	13,927
1928	3,241,000	23,786	16,358
1929	3,285,000	25,980	17,626
1930	3,366,000	29,126	21,421
1931	3,432,000	26,358	18,127
1932	3,479,000	25,235	15,804
1933	3,510,000	22,484	14,538
1934	3,540,000	20,916	13,509
Year ending March 31, 1936	3,690,000	24,053	16,356
1937	3,711,000	27,592	20,618
1938	3,731,000	30,345	23,649
1939	3,750,000	34,914	27,926

Note: The fiscal year was changed in 1935 to end March 31.

In the above table showing the general picture since 1913 the following facts are worthy to be noted regarding the number of sentenced persons.

From a low of 7,867 in 1917 for the War time years there was a steady increase during the following prosperous years to a high of 21,421 in 1930. This period of prosperity synchronized with the "Revolt of Youth" from traditional restrictions. Many went from liberty to license, hence the great increase in the number sentenced. Then, at least partly because of economic conditions, the reaction came and there resulted a rapid decrease, again accentuated by another factor, relief in cash or otherwise to the unemployed. The bottom for that swing of the pendulum was in 1934, with a total of 13,509 sentenced. Since that year the increase has been startling, establishing an all-time peak of 23,649 in 1938 and another terrific jump to 27,926 in 1939, the year now being reported.

As always, there are, no doubt, a number of causing factors. It is probably too early to see the situation in its true perspective. However, it seems appropriate to suggest some of the main causes without attempting at this time to place them in the proper order of importance:—Lack of proper character building in home training, unemployment situation reacting on adults and youths resulting in a feeling of defeatism, breaking down of moral standards, reaction against current social conditions and disregard for moral and social laws. There are single causes in some cases, but more often there are combinations in varying degrees of the above and lesser causes.

The huge majority of these prisoners as in former years, are young in age, below average in mentality, low in academic education and almost totally lacking vocational training. Add to all these causes and characteristics the comparative ease of obtaining deadly weapons and speedy motor cars and we have the natural result—the reckless youthful gun bandit. He is particularly a North American product, has appeared to only a minor degree in Great Britain and therefore, the correctional Institutions there are largely free from that type, who is a problem, whether at liberty or in prison.

The huge rapid increase of prisoners, of course, overtaxed our available accommodation. In the gaols cots were placed in the corridors, but because of lack of space some slept on blankets on the floors. Sanitary conditions continued comparatively good, as a result of improvements in recent years. There was daily sorting of these prisoners by officials of this Department and constant removal of the more hopeful cases and longer sentence prisoners to the Reformatories and Industrial Farms. Fortunately additional bed space had been provided there.

Two years ago as some insurance against increased prison population the Department adapted a building at the Ontario Reformatory, Mimico, and equipped it with seventy-five beds. That building was used by prisoners for the first time last Winter and was filled to capacity. The new dormitory building of 300 beds with complete hospital section at Burwash was completed in the Autumn of 1938 and immediately placed in use.

Over thirty years ago an Experimental Farm was established in Northern Ontario at Monteith by the Department of Agriculture. In 1922 control was transferred to the Department of Education, a large school building was added to the building already there and thus at this Northern Acadamy the sons and daughters of the North were given education in high school academic studies, agriculture and domestic science. As the years passed the rapid growth of towns and cities in the mining areas resulted in providing secondary education in many places and the Northern Academy was no longer required. Therefore, four years ago it was closed. Last October control of this valuable property was transferred to your Department and immediately selected short term prisoners from the District Gaol at Haileybury were placed in residence in one of the buildings and the work of adapting the school building into a permanent building for one hundred was undertaken. It has now been completed and is in use for either prisoners from that district or farther south. Thus, additional space for prisoners was provided.

The new cell block of 318 beds at the Ontario Reformatory, Guelph, is nearing completion and will be in use in the Fall of 1939. This is not regarded as additional space but to provide better custody and classification and relieve present dormitory space for other purposes of the Reformatory programme.

It might well have been expected that the crowded condition of the prisons and reformatories would have increased the restlessness of prisoners of recent years and resulted in additional disturbances in these Institutions. However, such was not the case. Actually discipline was remarkably good, considering the conditions. Many of the prisoners, of course, had better living conditions within prison than before being arrested and sentenced and realized that fact. It seems evident that they had no serious cause for complaint. Further, and of prime importance, the steady and considerable improvement in the personnel and training of the staffs resulted in constant firm discipline, considerate in recognizing and making allowance for the instability of their wards and quick and just in punishing deliberate and malicious wrong doing.

The work of training the prisoner is, obviously, of great importance but the effect is often wasted unless supplemented with proper after-care. The percentage of the total number of prisoners convicted for the second or more times remained approximately the same as in the previous year at 46%. The problem, therefore, is important. I have said in previous reports and further knowledge compels me to repeat that if the ex-prisoner is to be rehabilitated as a good citizen, it will be done first, by his own efforts, and second by the assistance and advice of those in daily contact with him—that is, his neighbours. The first essential is work, so he can honestly support himself; the second, ready, steady counsel and encouragement. In spite of discouraging conditions good and lasting work is being done by social service and religious organizations and citizens. There are indications that this problem is being more widely understood by our citizens in general and as such understanding increases, it inevitably must result in individual and joint action by patriotic citizens.

There are clear indications also of increased effort in the all important preventive field. There is more recognition of the necessity of properly adjusting the juvenile delinquent or prospective delinquent while still at a tender and susceptible age and this recognition has resulted in action. Groups, especially women's organizations, are making their influence felt in better movies, better radio plays and newspaper "funnies". Certainly, there is still room for much improvement so that the young impressionable mind, will not be perverted. I believe there is a widening sense of responsibility for others.

In the Institutions where plenty of work was available, particularly at the Reformatories and Industrial Farms, there was increased production because of increased population and demand for goods from other Departments. You will note in the financial statements a large reduction in the per diem maintenance cost per prisoner in the case of the gaols as well as in the Reformatories and Industrial Farms.

In conclusion, again I am pleased to be able to commend to you the loyal, excellent services which the members of our head office staff and officials and officers of the Institutions have given to this Province and they and I are grateful to you for the careful, kindly direction you have given us.

C. F. Neelands,
Deputy Provincial Secretary.

TABLE No. 1

Movement of Population in Ontario Reformatories and Industrial Farms.
April 1st, 1938, to March 31st, 1939.

	Ontario Reform-atory Guelph	Ontario Reform-atory Mimico	Indus-trial Farm Bur-wash	Indus-trial Farm Lang-staff	Andrew Mercer Reform-atory Toronto	Total
Remaining in custody April 1st, 1938	664	145	722	307	101	1,939
Committed during the year	1,091	472	1,271	2,711	196	5,741
Re-admitted from Penitentiaries	....	....	11	....	....	11
Re-admitted from Gaols and other Institutions	4	....	15	....	2	21
Parole Violators re-admitted	22	6	6	....	2	36
Ticket-of-Leave Violators re-admitted	2	....	1	....	....	3
Total Number in Custody during the Year	1,783	623	2,026	3,018	301	7,751
Discharged on expiration of sentence	591	182	1,091	2,565	165	4,594
Discharged by ticket-of-leave	74	8	4	1	....	87
Discharged by Parole Board	374	90	101	5	20	590
Discharged by payment of fines	4	4	9	64	1	82
Discharged by remission of sentence	32	12	....	3	....	47
Discharged by Order-in-Council	2	....	....	10	1	13
Discharged by Minister of Justice	....	....	8	....	1	9
Released on Bail	4	....	1	1	1	7
Transferred to Hospital	....	....	2	1	....	3
Transferred to Hospital for the Mentally ill	7	....	5	1	5	18
Transferred to Other Institutions	6	26	14	4	....	50
Returned to gaols	5	18	16	19	....	58
Deported	4	2	2	1	....	9
Released or transferred for other reasons	....	1	2	....	....	1
Escaped and not recaptured up to March 31st, 1939	2	....	2	1	....	7
Died while in custody	1	....	2	....	....	3
Total number discharged, released, died, etc.	1,106	343	1,259	2,676	194	5,578
Number remaining in custody, March 31st, 1939	677	280	767	342	107	2,173

The following tables show Social Conditions; Educational Status; Habits as to use of Intoxicants and Drugs; Nationalities; Occupations and Criminal History of Prisoners Committed to Ontario Reformatories and Industrial Farms for the year ending March 31st, 1939.

	Ontario Reformatory Guelph	Ontario Reformatory Mimico	Industrial Farm Burwash	Industrial Farm Langstaff	Andrew Mercer Reformatory Toronto	Total
2. Social Conditions						
Married	204	218	410	940	101	1,873
Single	887	239	815	1,659	76	3,676
Widowed	....	12	31	112	16	171
Divorced	....	3	15	....	3	21
3. Educational Status						
Illiterate	100	11	82	193	16	402
Elementary	814	343	936	2,071	137	4,301
High School	37	105	216	405	43	806
College or University	12	13	37	42	....	104
Educational Test not applied	128	....	....	....	....	128
4. Habits as to use of Intoxicants						
Abstainers	331	11	131	58	45	576
Temperate	534	177	467	1,284	54	2,516
Intemperate	226	284	673	1,369	97	2,649
5. Habits as to use of Drugs						
Abstainers	1,091	472	1,204	2,608	185	5,560
Addicts	....	....	67	103	11	181
6. Nationalities						
Canadian born	945	371	1,021	1,927	162	4,426
English	48	36	44	231	12	371
Irish	14	8	15	169	1	207
Scotch	17	12	33	187	6	255
United States	16	8	21	32	3	80
Other	51	37	137	165	12	402
7. Criminal History						
First time	258	150	324	407	108	1,247
Second time	147	140	124	242	29	682
Third time	161	79	151	110	18	519
More than third time	525	103	672	1,952	41	3,293
8. Occupation						
Agricultural	76	54	73	116	....	319
Commercial	262	156	197	878	15	1,508
Domestic	1	13	83	140	152	389
Labourers	591	113	492	1,125	....	2,321
Mechanics	99	119	408	425	....	1,051
Professional	4	17	11	8	1	41
No occupation	58	....	7	19	28	112

Length of Sentences received by Prisoners committed in the Ontario Reformatories and Industrial Farms and their Ages.

	Ontario Reformatory Guelph	Ontario Reformatory Mimico	Industrial Farm Burwash	Industrial Farm Langstaff	Andrew Mercer Reformatory Toronto	Total
9. Ages of Prisoners						
15–19	613	1	29	50	32	725
20–24	206	155	321	261	53	996
25–29	95	103	247	239	22	706
30–34	44	68	165	331	37	645
35–39	44	53	184	352	22	655
40–44	31	29	119	336	17	532
45–49	25	20	60	306	4	415
50–54	18	14	70	294	4	400
55–59	7	18	49	235	3	312
60–64	3	6	20	174	......	203
65–69	4	4	7	103	1	119
70 and over	1	1	....	30	1	33
10. Length of Sentences						
Definite						
Under 30 days	......	....	......	192	2	194
30 days and under 60	3	....	107	1,738	36	1,884
2 Months and under 3	17	8	65	293	15	398
3 " " " 4	104	41	161	272	15	593
4 " " " 5	38	10	61	55	12	176
5 " " " 6	12	4	47	6	2	71
6 " " " 9	109	62	156	127	33	487
9 " " " 12	15	15	29	....	2	61
12 " " " 15	131	66	167	7	8	379
15 " " " 18	1	7	7	....	1	16
18 " " " 21	19	6	28	....	3	56
21 " " " 24	39	12	37	1	3	92
Indefinite						
3 Months to 6 Months	95	68	37	15	2	217
3 " to 9 "	11	5	4	....	1	21
3 " to 12 "	4	1	1	1	1	8
3 " to 18 "	....	1	....	....	....	1
3 " to 24 "	....	.....	....	....	....	....
6 " to 9 "	58	49	43	1	1	152
6 " to 12 "	33	15	31	1	7	87
6 " to 18 "	13	1	5	....	1	20
6 " to 24 "	....	1	....	....	....	1
9 " to 12 "	20	22	20	1	....	63
9 " to 18 "	3	3	1	....	....	7
9 " to 24 "	....	1	....	....	....	1
12 " to 18 "	45	44	30	....	....	119
12 " to 24 "	21	7	12	....	....	40
18 " to 24 "	17	12	6	....	....	35
24 " to 36 "	10	9	4	....	....	23
24 " to 48 "	4	2	6	....	....	12
Miscellaneous	269	....	206	1	51	527

	Ontario Reformatory Guelph	Ontario Reformatory Mimico	Industrial Farm Burwash	Industrial Farm Langstaff	Andrew Mercer Reformatory Toronto	Total
11. Escapes						
Escaped and evaded capture	2		2	1		5
Escaped and were recaptured	14	4	19	5		42
12. Employment of Prisoners in the Institution during the Year (Per Centage)						
Clerical	1.20	.86	2.33	.50		
General Maintenance	22.50	22.58	32.65	27.00	53.00	
Sick	6.20	4.73	9.09	2.50	5.00	
Bush Operations			19.69			
New Building	12.35					
Industrial	33.95	53.12	14.60	10.00	40.00	
Farm and Garden	9.80	18.71	16.30	40.00	2.00	
Land and Road Improvement	14.00		5.34	20.00		
13. Number of Officers and Employees on March 31st						
Superintendent	1	1	1	1	1	5
Physicians	2	1	4	1	1	9
Dentists	1	1	1		1	4
Teachers	2		2		1	5
Bursars or Stewards		1		1	1	3
Storekeepers	1		1			2
Asst. Storekeepers	1					1
Accountants, Clerks, Stenographers, etc.	11		8	2	2	23
Sergeants (Day)	1	1	2	1		5
Asst. Day Sergeants	1		4			5
Night Sergeants	1	1		1		3
Asst. Night Sergeants			1			1
Guards (Day) or Attendants	73	20	86	23	15	217
Guards (Night) or Attendants	19	9	27	5	3	63
Kitchen and Dining Room Help	1			1		2
Nurses			1		1	2
Farmers, Gardeners and Assts.	1		1	1	1	4
Engineers and other Mechanical Help	9	3	9	1	6	28
All other Employees	16	1	2		2	21
Total	141	39	150	38	35	403

	Ontario Reformatory Guelph	Ontario Reformatory Mimico	Industrial Farm Burwash	Industrial Farm Langstaff	Andrew Mercer Reformatory Toronto	Total
A. Crimes Against the Person						
Abduction	2	2	......	......	......	4
Abortion	3	......	......	......	3	6
Assault Common	15	9	42	22	......	88
Assault Felonious	1	2	5	31	2	41
Attempted Suicide	2	1	1	......	2	6
Cutting and Wounding and attempting same	......	......	2	4	1	7
Shooting with intent	......	......	......	......	......	......
Stabbing	......	......	......	......	......	......
Manslaughter	1	6	......	......	......	7
Carnal Knowledge	18	8	2	......	......	28
Incest	4	......	......	......	......	4
Rape and Assault with intent	1	......	......	......	......	1
Total	47	28	52	57	8	192
B. Crimes Against Property						
Arson and Incendiarism	7	3	1	2	1	14
Breaking and Entering	14	43	33	81	......	171
Burglary	3	......	112	......	......	115
Housebreaking	92	6	3	......	......	101
Robbery	34	17	12	8	5	76
Forgery	16	19	22	8	4	69
Fraud	......	8	8	1	......	17
False Pretences	40	46	50	114	11	261
Shopbreaking	200	29	14	......	......	243
Theft of Cars	163	26	69	1	......	259
Taking without owners consent	43	4	2	10	......	59
Larceny or Theft	213	90	255	435	21	1,014
Receiving Stolen Goods	32	21	49	59	4	165
Trespass	......	4	3	......	......	7
Total	857	316	633	719	46	2,571

	Ontario Reformatory Guelph	Ontario Reformatory Mimico	Industrial Farm Burwash	Industrial Farm Langstaff	Andrew Mercer Reformatory Toronto	Total
C. Crimes Against Public Morals and Decency						
Bigamy	3	5	1	3	2	14
Indecent Assault	22	6	12	5	....	45
Indecent Exposure or other Indecent Act	4	....	11	14	....	29
Inmates and Frequenters of Houses of Ill-fame	1	....	....	1	....	2
Keeping Houses of Ill-fame	....	6	7	8	10	31
Juvenile Delinquency	16	12	4	19	5	56
Perjury	8	3	2	4	1	18
Prostitution	....	....	2	....	13	15
Seduction	2	2	1	....	....	5
Buggery	2	1	....	1	....	4
Total	58	35	40	55	31	219
D. Crimes Against Public Order and Peace						
Breach of Liquor Control Act	23	13	160	143	32	371
Breach of Excise Act	5	9	18	9	1	42
Breach of Narcotic Drug Act	....	4	57	5	2	68
Breach of By-laws	....	....	....	5	1	6
Carrying Unlawful Weapons	....	5	5	13	....	23
Cruelty to Animals	....	1	....	4	....	5
Drunk and Disorderly	....	5	10	1,212	....	1,227
Escaping from Constable	....	....	....	....	....	....
Escaping from Prison	4	....	4	....	....	8
Gambling	....	12	....	37	....	49
Obstructing an Officer	....	7	2	13	1	23
Unlawful shooting	....	....	....	....	....	....
Vagrancy	19	14	159	341	49	582
Total	51	70	415	1,782	86	2,404
E. Other Offences not Enumerated						
Total	78	23	131	98	25	355
GRAND TOTAL— Totals of A., B., C., D. and E.	1,091	472	1,271	2,711	196	5,741

ONTARIO REFORMATORIES AND INDUSTRIAL FARM

DEPARTMENT OF PROVINCIAL SECRETARY, REFORMATORIES AND PRISON BRANCH

Average maintenance cost per day per inmate for the twelve months from April 1, 1937 to March 31, 1938, and April 1, 1938 to March 31, 1939.

	Ontario Reformatory Guelph		Ontario Reformatory Mimico		Mercer Reformatory Toronto		Industrial Farm Burwash	
	1938	1939	1938	1939	1938	1939	1938	1939
Days' Residence of Inmates	219,708	242,239	57,853	73,010	40,392	39,318	215,361	242,742
Average No. of Inmates	601.9	663.7	158.5	200.3	110.6	107.7	590.	689.
EXPENDITURE								
Medicines	.0401	.0354	.0279	.0328	.0101	.0087	.0637	.0623
Provisions	.3899	.3395	.2644	.2474	.2476	.2398	.4848	.4441
Fuel, Light and Water	.1103	.1053	.0599	.0620	.1762	.1864	.1382	.1072
Clothing	.1271	.0895	.0977	.0879	.0421	.0136	.1270	.1317
Laundry and Cleaning	.0351	.0379	.0629	.0581	.0630	.0613	.0317	.0317
Furniture and Furnishings	.0242	.0281	.0140	.0425	.0374	.0383	.0281	.0309
Office Expenses	.0152	.0124	.0157	.0143	.0156	.0142	.0081	.0054
Farm, Feed and Fodder Expense	.1229	.0999	.1115	.0858	.0145	.0174	.1055	.0743
Contingencies	.0639	.0545	.0797	.0629	.0436	.0490	.0788	.0763
Repairs to Buildings	.1947	.1298	.1176	.1323	.1398	.1230	.1318	.1307
Salaries	.7849	.6514	.8130	.6815	1.0343	1.1004	.7578	.7025
Industrial Operations	2.3228	2.3070	.4904	.3807	2.8427	3.2739	.1036	.0752
Total Gross Per Capita	$4.2311	$3.8907	$2.1547	$1.8882	$4.6669	$5.1260	$2.0591	$1.8723
REVENUE								
Custodial Revenue	.1152	.1170	.1488	.1342	.1290	.1072	.1843	.1311
Perquisites	.0657	.0548	.0440	.0412	.1820	.1946	.1815	.1609
Industrial Revenue	2.4379	2.3830	.6353	.8689	2.7967	3.3807	.0693	.0785
Total Revenue Per Capita	2.6188	2.5548	.8281	1.0443	3.1077	3.6825	.4351	.3705
Net Per Capita Cost	$1.6123	$1.3359	$1.3266	$ .8439	$1.5592	$1.4435	$1.6240	$1.5018

	Total Gross Expenditure		Total Revenue		Total No. of Days' Stay	
	March 31 1938	March 31 1939	March 31 1938	March 31 1939	March 31 1938	March 31 1939
Ontario Reformatory, Guelph	929,618.38	942,488.50	575,378.09	618,876.30	219,708	242,239
Ontario Reformatory, Mimico	124,658.02	137,857.50	47,909.59	76,240.93	57,853	73,010
Mercer Reformatory, Toronto	188,504.70	201,545.73	125,525.56	144,788.89	40,392	39,318
Industrial Farm, Burwash	443,447.93	454,499.52	93,709.17	89,954.23	215,361	242,742
	1,686,229.03	1,736,391.25	$842,522.41	$929,860.35	533,314	597,309
Less Revenue	842,522.41	929,860.35				
	$843,706.62	$806,530.90				

Average Per Capita Cost per Diem, 1937-38..$1.5820

Average Per Capita Cost per Diem, 1938-39..$1.3503

COMPARATIVE EXPENDITURE AND REVENUE FOR THE TWELVE MONTHS ENDING MARCH 31st, 1938 AND MARCH 31st, 1939.

	EXPENDITURE				REVENUE			
	March 1938	March 1939	Increase	Decrease	March 1938	March 1939	Increase	Decrease
Ontario Reformatory, Guelph—								
General Maintenance	$204,042.68	$194,430.99		$ 9,611.69	$39,754.71	$41,613.70	$ 1,858.99	
Repairs to Buildings	42,776.96	31,442.01		11,334.95				
Salaries	172,451.65	157,803.14		14,648.51				
Industries	510,347.09	558,812.36	$48,465.27		535,623.38	577,262.60	41,639.22	
Ontario Reformatory, Mimico—								
General Maintenance	42,450.34	50,650.11	8,199.77		11,154.91	12,801.85	1,646.94	
Repairs to Buildings	6,800.38	9,658.04	2,857.66					
Salaries	47,034.24	49,754.17	2,719.93					
Industries	28,373.06	27,795.18		577.88	36,754.68	63,439.08	26,684.40	
Mercer Reformatory, Toronto—								
General Maintenance	26,259.35	24,719.87		1,539.48	12,561.27	11,867.18		694.09
Repairs to Buildings	5,645.64	4,836.01		809.63				
Salaries	41,776.20	43,267.23	1,491.03					
Industries	114,823.51	128,722.62	13,899.11		112,964.29	132,921.71	19,957.42	
Industrial Farm, Burwash—								
General Maintenance	229,556.52	233,991.27	4,434.75		78,776.56	70,891.94		7,884.62
Repairs to Buildings	28,376.28	31,731.64	3,355.36					
Salaries	163,209.43	170,532.82	7,323.39					
Industries	22,305.70	18,243.79		4,061.91	14,932.61	19,062.29	4,129.68	
TOTALS	1,686,229.03	1,736,391.25	$92,746.27	$42,584.05	$842,522.41	$929,860.35	$95,916.65	$8,578.71

Increase in Ordinary Expenditure—$50,162.22. Increase in Ordinary Revenue—$87,337.94

Reformatories

THE ONTARIO REFORMATORY, GUELPH.

June 12, 1939.

DEAR SIR:

The attached statistical report of the Ontario Reformatory, Guelph, covers the fiscal year ending March 31, 1939.

1,091 were committed to this Institution during the year, which is an increase of 179 over the previous year. 819 or (75%) of the total were under the age of 25 years. 701 or (64.2%) were under the age of 21 years. The incidence of youth in our population is thus seen to be steadily rising. The increase under 21 years of age over the year 1938 is 4.45% of our total population.

258 commitments were first time convictions and for one offence. 161 commitments were first time convictions serving more than one sentence. 285 had appeared in Court once previously on one or more charges. 387 had appeared in Court twice to many times previously with multiple dispositions.

Recidivism to our own Institution shows that 124 had been committed to our Institution once previously; 13 twice previously and 2 three times previously. Thus 139 or (12.7%) of our commitments were our own graduates.

From Industrial Schools we received 105 who had served one term there; 8 who had served two terms and 2 who had served three terms,—a total of 115.

By our educational tests, 100 were illiterate; 814 had elementary, (and the majority very elementary) standing. 37 had some high school standing; 12 had some College or University training and 128 were not tested because they were serving three months or less.

It is quite the ordinary thing on admission for an inmate to overstate his education. A mental defective who is illiterate when asked will readily claim to have entrance standing. Similar claims made to being skilled in trades or occupations are readily exploded and are often found to be part of a defence mechanism the prisoner has used to build up his ego. The first lesson the inmate learns here, is that he is placed in his true category of education and mental ability. His placement for work is governed by this category during all the time he is with us. The scores are readily accessible to all officers in charge of men, and are of great benefit in discipline and management.

16 escapes were made and 14 were recaptured, leaving two at large at the end of the fiscal year.

The medical department gave excellent service during the year. Some 42 major and minor operations were performed. Of these 8 were for the radical cure of hernia. There were 14 cases of pneumonia with our one and only death, which is quite a remarkable record in itself and gives great credit to the new drug

M.B. 693 which was used in all cases. We had an extensive outbreak of Influenza complicated with a haemolyptic strepto coccus which kept our medical department busy during February and March, and for several weeks increased our hospitalization to 120 beds.

The incidence of venereal disease in our inmate admissions shows that 2.93% have syphilis and 1.57% have gonorrhea. "In St. Michael's Hospital, Toronto, the percentage dropped to an average of 2.03% over the last five years". This refers to blood tests for syphilis, and is quoted from the Canadian Public Health Journal—October 1937. A goodly number of venereal disease infected youths come to us charged with vagrancy,—at their own request so that they might obtain adequate medical treatment. Four inmates became mentally ill and were transferred to Ontario Hospitals. The dental clinic gave 2,030 treatments to our inmates during the year.

The school functioned well during the year. The night vocational classes were in the main fairly well attended. It is noted that certain officers hold the attention and attendance of their classes better than others.

The gymnasium work and physical training is compulsory and a full programme has been carried out nightly during the year.

The library total of books at the end of the year stands at 3,603, which shows our acquisitions, outside of replacements, for the year to have been some 1,742 volumes. A great deal of reading by inmates is recorded, and I desire to again thank the public libraries and interested friends for their kindly donations.

All the industrial departments of our Institution have operated adequately throughout the year. The total industrial revenue was $579,460.05, an increase over the previous year of some $39,000.

It is difficult to effect a true comparison of the total revenue of the fiscal year under report with that of previous fiscal years owing to a revision of costs which resulted in a direct saving to our sister Institutions and Government departments, but at the same time reduced the total value of our industrial operations from a monetary standpoint. Our total profit for all industries amounted to $32,836.69 this year. Our total profit for the year ending March 31, 1938, was $33,858.05.

In the auto marker plant, 793,091 pairs of plates were made. This is an increase of 17,896 pairs over the previous year.

In the abattoir our total sales of products amounted to 2,220,599 pounds, (an increase of 201,917 pounds over the previous year), with a value of $301,134.25.

Our cannery produced goods to the value of $66,822.13, which is an increase in the amount of products of some 29,885—No. 10 cans of fruits and vegetables, and an increase of 51,258 pounds of jams and marmalades.

The machine shop had a very heavy production of steel corridor grilles, cell fronts and locking devices for our new cell block. Also some 1,500 new beds and springs were fabricated for the Ontario Hospital, St. Thomas. These products were valued at $38,296.78.

The planing mill operated steadily throughout the year, making furniture, repairs and replacements, to the extent of $11,839.63.

The tailor shop is one of our busiest industries. The operations are very diversified and some sixty different lines are manufactured. A total of over 31,000 articles were made, included in which were over 1,100 three-piece men's tweed suits. The sales amounted to $42,102.77.

The woollen mill had a very busy year. The production was 3,124 grey blankets, 7,966 white hospital blankets, 2,664 yards of mackinaw cloth and 11,814 pairs of woollen socks. The sales amounted to $34,783.67.

On our farm, the crops were good and all sucessfully harvested. The total value of farm recoveries was $39,507.88, an advance of some $2,000 over the previous year. Increased hog production accounted for an increase of some $3,000 in sales over the previous year.

Our quarry and sand pit provided supplies of crushed stone and sand for the new cell block with a value of $2,212.72.

The swamp reclamation project went on well during the winter months.

I must apologize for giving in detail the production of our Institution over the past year. It was done to show how we have been able to keep between six and seven hundred men busy at all times. The old saying that the "Devil finds plenty for idle hands to do" is exemplified around a prison. Having this work is the basis on which our rehabilitation programme is built. Credit is due our staff that they can take unskilled labour and turn out products which will compete for quality with products manufactured on the outside. Great credit is due the far-sighted policy of our Government that allows us to dispose of all of our products to our own Government Institutions.

Discipline was well maintained during the year.

We are grateful to those who, during the year provided entertainment, religious services, and spiritual advice to our inmates.

I wish to commend my staff for their conscientious and loyal service. I wish to thank the Honourable Mr. Nixon, yourself and your staff for the kindness, courtesy and aid you have given me in this difficult and important work of reformation and rehabilitation of our inmates.

Yours very truly,

(Signed) J. D. HEASLIP, M.D.,

Superintendent.

Mr. C. F. Neelands,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto.

THE ONTARIO REFORMATORY, MIMICO.

June 14th, 1939.

DEAR SIR:—

I beg to submit the Annual Report of the Ontario Reformatory, Mimico, Ontario for the year ending March 31st, 1939.

The year just closed has been a busy one, our population became much larger than former years, reaching a total of 313, the highest in the history of the Institution. The Annex Building, known as the Beverly Jones Cottage formerly part of the Victoria Industrial School remodelled and redecorated two years ago was opened December 3rd, 1938 and is still in use. This building houses 72 men in four rooms of eighteen beds each. The men are very comfortable and prefer it to the main buildings as it is quieter and more homelike.

The health of our inmates during the year has been good with the exception of a mild epidemic of "Flu" and Tonsolitis. The epidemic lasted from January to March and affected some ninety-five inmates. During the year four cases of Pneumonia were treated in our Hospital ward with the new drug, Dagenon.

Farm operations were carried on successfully; haying, harvesting and storing root crops were carried out under ideal weather conditions. There were no crop failures, all were above average.

Our dairy herd wintered well. Twelve new cows were purchased last Fall and added to our herd, which was timely, all have done well. It is very gratifying to know that the butter-fat test on R.O.P. is averaging 3.5% with some cows averaging slightly better than 4% which is remarkable for Holsteins. About four years ago we started raising heifer calves from cows whose R.O.P. was favorable and now are proving the wisdom of doing so. Male calves are disposed of to local farmers for vealing or breeding. One male calf sold to a local farmer was good enough to be among the prize winners at the C.N.E. and another was very favorably mentioned in the Holstein-Friesian year book.

The products of our live stock are as follows:—

Dairy Herd:—	265,785	Pounds of Milk.
	21	Heifer calves (being raised for milch cows).
	10	Calves sold for Vealing.
	2	Calves sold for Breeding.
Swine:—	185	Hogs; 35,560 pounds live weight.
	1	Service Boar.
	8	Brood Sows.
Poultry:—	1,564	Dozen Eggs.
	1,193¾	Pounds Dressed Poultry.

Industrial operations: The sales of floor, wall and construction tile and brick have been the largest on record due to the building programme by the Ontario Government. All products are sold only to the Government except floor and wall tile which may be sold to the public due to there being no other manufacturer of same in Canada.

Our building programme for the year was very light; only necessary repairs being carried out. During the winter some work was done enlarging and improving our hog pen greatly improving the building as well as providing space for more hogs.

I wish to again recommend for consideration the enlarging of our present machine shop as outlined in my report of March 31st, 1938, I would also like to recommend for your consideration the five recommendations included in the same report.

In conclusion, I should like to express my personal thanks and appreciation to the Honourable Mr. Nixon, yourself, officers and members of your Department for kindly counsel and valued assistance when called on. I should also like to thank the officers and members of the staff of this Institution for the fine support and loyal co-operation during the past year. I also wish to express our grateful thanks to the Reverend Father McGrath, Rev. M. G. B. Williams (Anglican), Reverend C. E. Dyer (United Church), Mr. R. B. Hayhoe (Plymouth Brethren) and various members of the Salvation Army and others who have taken care of the spiritual welfare of the inmates or provided entertainment from time to time.

Yours sincerely,

(Signed) J. R. ELLIOTT,

Superintendent.

MR. C. F. NEELANDS,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto.

INDUSTRIAL FARM, BURWASH

SIR:

I have the honour to forward the following report for the Industrial Farm, Burwash, for the year ending March 31st, 1939.

Owing to the increase of prisoners at the different jails throughout the province, and to relieve the overcrowding of Burwash, where the maximum was 720, we took over as an annex the Monteith Farm of eight hundred acres, situated on the Ferguson Highway at Monteith. This farm had formerly been used as an experimental farm, and later as a boarding school for children in the north where there were no schools, but was discontinued a few years ago when schools were built in the different towns. As there were buildings equipped with electric power and waterworks, we sent a Sergeant, in charge of an experienced staff, to open the buildings, and, after some alterations in the brick school house, our surplus prisoners were sent there. A herd of dairy cattle supplies milk for the prisoners and staff, and the farm, having about a hundred acres under cultivation, provides work for the inmates as well as helping to support the Institution by growing vegetables and raising livestock.

The new modern and fireproof hospital and dormitory building at Burwash, started last year, is now completed and occupied, and is a great asset. The old dormitory is being remodelled, and when finished will be used as a tailor shop, supplying work for sixty inmates, many of them being marked light order through physical disabilities, and this will teach them a trade that may enable them to earn a living after their discharge. The double brick house started last year is occupied and bringing in revenue, and foundations were laid for eight more houses, with four nearing completion. A central steam heating plant was installed at Camp Five, and is a big improvement.

During the winter, the inmates were engaged in cutting and hauling saw logs to be cut into lumber and shingles at our saw mill, and firewood for the heating plants, also telephone poles and fence posts were cut to replace any old ones. In the summer, ditches were dug and cleaned out on both sides of the four miles of road between the main camp and Camp Five. Crushed rock was spread on the surface, eight feet wide. Drains were dug to help drain low-lying meadows, and several bad curves on the road to the C.P.R. were cut out, and our general farm work was carried on. Our grain and hay crop was exceptionally good, but the sunflowers, used for ensilage, was only fair. Our cattle, pigs and sheep are thriving, and we bought ten more dairy cows, and we now use very little prepared milk.

Baseball was played during the summer by the inmates, and in the evenings and week-ends they are given cards, checkers and dominoes to play, and they were allowed the use of a large library, well equipped with books, magazines and papers. Boxing practice is held about three evenings a week and a tournament is held every three months, and all inmates are allowed to attend these tournaments. Discipline has improved among the inmates, and their general health is good. Religious services are held by the Salvation Army, Anglican and Roman Catholic Church, as well as the Gideons, and we desire to thank them for their kindly interest.

In conclusion, I wish to thank all members of my staff for their devotion to duty, loyalty, and for their general interest in the welfare of the Institution. Also I wish to thank all our officials at the Head Office in Toronto, for their advice and co-operation. It has been a pleasure to work in such harmony as exists between us.

I have the honour to be,

Sir,

Your obedient servant,

(Signed) H. W. POWELL,

Superintendent.

MR. C. F. NEELANDS,
Deputy Provincial Secretary,
Parliament Buildings,
Toronto.

TORONTO MUNICIPAL FARM

LANGSTAFF, ONTARIO.

The Deputy Provincial Secretary,
Parliament Buildings,
Toronto, Ont.

DEAR SIR:

The Statistical Report for the year ending March 31st, 1939, is being forwarded to your office under separate cover.

It will be noted that there was an increase over last year in commitments to the extent of 253. This increase, which brought the total number of commitments to the highest yet recorded since the Institution was first opened in 1912, is mostly accounted for by additional convictions for "Crimes against Property" viz. Breaking-Entering and Theft. Despite the increased numbers in custody which involved our being frequently taxed to the limit of our accommodation, the year, generally, was uneventful and free from any suggestion of unrest on the part of the inmate population—something which could not have been said for the past two or three years. Conditions within the Institution, diet and privileges remained the same as before and it is, therefore, reasonable to believe that the improved attitude of the population is due to the determined efforts of the Staff to maintain a high standard of discipline.

It has been increasingly difficult for the past few years to find suitable outside employment during the winter months and it is now of the utmost importance that provision be made for the future so that there may be no periods of idleness except in extreme weather. Because of the objection to placing articles manufactured in Penal Institutions on the market and because City Institutions cannot be supplied with such articles, the type of work to be sought must, of necessity, be of a somewhat non-productive nature. This, it will be agreed, is not constructive to the mind of the Inmate neither does it give him any inducement to take an interest in his work. On the contrary, totally non-productive labour as practiced in prisons until well into the present century tended to make the prison population of those days resentful, antisocial and dull. Partial productive labour would, therefore, only be expected to partially remove that state of mind and attitude towards society and would fail to give to present-day inmates the benefit of what experience has proven to be in the best interest of rehabilitation and reform.

Members of the staff of this Institution, unlike members of the staff of Provincial Institutions are deprived of the privilege of participating in any superannuation plan and while it is true that over a period of a few years past the City of Toronto has been pleased to grant a nominal weekly allowance to retiring members of the staff there can be no feeling of assurance for the future and those who have served faithfully and well for many years depend for their existence in late life on the generosity or otherwise of those who happen to be in authority at the time. To ensure continuity of personnel in a service where experience is so vitally important provision should be made for an adequate pension to be forthcoming at the end of a definite period of years.

During the year men were employed on grading, draining, general farm work, bush work, dairying, teaming and truck farming, etc. Crops were fair to good and all departments were operated in a very satisfactory manner with a fair margin of profit to their credit. This Institution supplied bread for The Toronto Jail and Detention Home in addition to milk and garden produce.

Early in the year a new well with a capacity of 50 gallons per minute was brought in and the water supply, which had previously been of some concern, is now assured.

Entertainment during the year was provided by the Church of England, The Salvation Army and The Originals Club, while the religious services were conducted by Capt. Mason, Brigadier and Mrs. Owen and Fathers Kane and McMahon. These services have been well attended and the entertainments thoroughly appreciated.

A true spirit of co-operation and helpfulness has again been forthcoming from the Department and from members of the Institution staff. This assistance is most sincerely appreciated.

Yours truly,

(Signed) G. HEDLEY BASHER,

Superintendent.

MERCER REFORMATORY.

1155 King Street West, Toronto

C. F. Neelands, Esq.
Deputy Provincial Secretary,
Parliament Buildings,
Toronto, Ontario.

Sir:

I submit herewith the Annual Report of the Andrew Mercer Reformatory for Females for the year ending March 31, 1939. The statistical tables appended hereto show the population, the condition of life and the work engaged in before entering the Reformatory.

During the year the health of the inmates was good, with no contagious diseases or epidemics and no deaths. Fifteen babies were born, and three more were admitted with their mothers from another institution. In general the discipline of the Institution was good throughout the year. There were infractions of rules but not so many as might have been expected considering the number of incorrigible girls sent here from other institutions. Five women were problem cases because they could not adjust themselves. They were found to be mentally ill and were transferred to mental hospitals.

Because this is an old building, the hazard of fire must be kept constantly in mind, also it naturally requires continual repair and this was carried on throughout the year. Within the past few years the building has been painted inside and outside, the women doing all the inside painting.

The radio was overhauled and loud speakers were placed in each corridor. The library continues to be widely used and class instruction has been carried on along the same lines as heretofore.

The hairdressing parlour, started in the fall of 1937 and supervised by a qualified hairdresser, has been of great value in encouraging the inmates to take an interest in their personal appearance. A course in home nursing was given during the winter months by a registered nurse from the Red Cross Society.

In our factory we continue to make garments of all kinds for use in Provincial Institutions. During the year, 1,411 dozen garments were made, 9,861 dozen pieces of flat work, while 1,822 dozen articles of clothing were cut only. A good deal of work has been turned out by the women in the laundry: 192,623 garments and 193,739 pieces flat work.

We endeavour to raise in the garden all the vegetables that it is possible to produce. The gardener reported the harvest as follows:—2,050 lbs. beets, 1,900 lbs. carrots, 2,050 lbs. cabbage, 900 lbs. celery, 1,225 lbs. parsnips, 400 lbs. squash. We also had early spring lettuce, radishes, spinach, asparagus, tomatoes, beans and corn.

I take this opportunity of expressing my appreciation of the loyal co-operation of the members of the staff and of thanking the many interested workers who have sought the spiritual advancement of our inmates, also the many kind friends who have contributed in so many ways to the happiness of those confined in this Institution.

I have the honour to be, Sir,

Your obedient servant,

(Signed) JEAN MILNE,

Superintendent.

Board of Parole

ANNUAL REPORT OF THE ONTARIO BOARD OF PAROLE

For the Year Ending March 31st, 1939.

The Ontario Parole Board through the year just ended has been successful in the rehabilitation of many persons sentenced to indeterminate terms in the different provincial reformatories. Much of this success can be attributed to the co-operation the Parole Office has received from the various municipal and provincial police, and many local organizations throughout the province, the members of which are interested in the welfare of those in their community who had come in conflict with the law.

Owing to the conditions which now exist it is difficult in many cases for inmates who have been granted parole to secure employment, but in the majority of cases this has been arranged, often through the efforts of the officials and organizations mentioned above.

The Ontario Parole System has, through its efforts during the year just ended, proved an effective instrument of rehabilitation. Through the close supervision of men and women under this System, particularly toward home and family obligations, a decided improvement has been evidenced. Closer co-operation with both municipal and provincial police, assisted materially by the public, owing to a more sympathetic understanding of the system, a finer spirit of human relationship now exists. The Board, we believe, through its officers, has now created a better understanding with men and women under its supervision.

The great essential work of the Board of Parole is the re-establishing of the offender and his restoration to society as a respected citizen; yet, there is an unsentimental monetary side to the work as well. A man inside an institution is a decided liability, owing to the cost of maintenance by the Province, but, on going out to remunerative work he becomes an asset, the whole families are by the one process removed from dependence upon charitable organizations and municipal relief.

The Board is of the opinion that it would be of great assistance to the parole office if there were, at different points in the Province, representatives who would assist in securing employment and in the placing and supervision of inmates granted parole.

The personnel of the Board was not changed during the year and is composed of: J. F. McKinley, L. J. Long, A. F. Hatch, R. S. Clark, W. B. Common and Mrs. D. Strachan.

The Executive Staff of the Board is comprised of C. F. Swayze, Chief Officer and Secretary, G. R. Trumbell, Assistant Parole Officer, four stenographers and one filing clerk.

Number of meetings held during the fiscal year ending March 31st, 1939	38
Paroles authorized	717
Paroles put into effect	602

Parole Violators:

Re-convicted:

Paroled previous to March 31, 1939	22		
" during the fiscal year	28		
	—	50	

Sent Back and Parole Cancelled:

Paroled previous to March 31, 1939	2		
" during the fiscal year	3		
	—	5	

Disappeared:

Paroled previous to March 31, 1939	5		
" during the fiscal year	17		
	—	22	
		—	77
			=

Total Failures:

Paroled previous to March 31, 1939	29		
" during the fiscal year	48		
	—		77
			=

Paroled:

Men	571		
Women	31		
	——		602

Failures of those paroled during the fiscal year.....7.97%

Annual Report upon the

Gaols of Ontario

FOR THE YEAR ENDING MARCH 31ST, 1939

1.	City Gaols (Toronto and Hamilton)	2
	County Gaols	35
	District Gaols	10
	Total number of Gaols in Ontario	47
2.	Total expenditure for Gaol Maintenance in Ontario:	
	For year ending March 31st, 1938	$500,213.00
	For year ending March 31st, 1939	548,283.92
3.	Average maintenance cost per day per prisoner:	
	For year ending March 31st, 1938	$ 1.01
	For year ending March 31st, 1939	.93
4.	Average dietary cost per day per prisoner:	
	For year ending March 31st, 1938	.1508
	For year ending March 31st, 1939	.1477
5.	Number of prisoners committed:	
	For year ending March 31st, 1938	30,345
	For year ending March 31st, 1939	34,914
	Increase	4,569
6.	Number of prisoners sentenced:	
	For year ending March 31st, 1938	23,649
	For year ending March 31st, 1939	27,926
	Increase	4,277

COMMITMENTS

	1937-38	1938-39	Decrease	Increase
Murder	23	18	5	
Manslaughter	58	44	14	
Crimes:				
Against the person	1,374	1,466		92
Against Property	7,381	8,990		1,609
Against Public Morals and Decency	748	824		76
Against Order and Peace	17,978	21,317		3,339
Mentally Ill	451	453		2
Number of Days Stay of Prisoners	494,052	591,941		97,889
Escapes	9	11		2
Escaped and Recaptured	6	9		3
Deaths in Gaols	11	4	7	

The following tables show total Sex, Social Conditions, Habits, and Educational Status of all prisoners committed:

Sex

	1937-38	1938-9
Male	28,767	33,162
Female	1,578	1,752

Social Conditions

Married	10,466	11,576
Unmarried	19,879	23,338

Habits

Temperate	9,764	12,053
Intemperate	20,581	22,861

Educational

Could read or write	29,339	33,716
Could neither read nor write	1,006	1,198

The following tables show the Nationality, and Occupation of all prisoners committed:

Nationality

	1937-38	1938-39
Canadian Born	22,910	26,624
English	1,796	1,980
Irish	912	996
Scotch	1,180	1,245
United States	590	623
Other Countries	2,957	3,446

Occupations

Agricultural	1,415	1,502
Commercial	5,970	6,265
Domestic	1,512	1,680
Labourers	16,818	20,346
Mechanics	3,126	3,282
Professional	331	423
No Occupation	1,173	1,416

NUMBER OF TIMES COMMITTED

	1937-38	%	1938-39	%
First Time	16,603	54.7	18,874	54.0
Second Time	4,929	16.3	5,646	16.2
Third Time	3,187	10.5	3,590	10.3
More than Third Time	5,626	18.5	6,804	19.5
	30,345		34,914	

NUMBER OF PRISONERS COMMITTED REPORTED AS DRUG ADDICTS

Belleville	18	Napanee	1
Brantford	4	Ottawa	7
Goderich	1	Peterboro	2
Guelph	2	Toronto	195
Hamilton	36	Welland	1
Kitchener	3	Windsor	2
London	4	Woodstock	1
		Total	277

NUMBER OF PRISONERS SENTENCED TO CORPORAL PUNISHMENT

Belleville	1	Welland	25
Brockville	7	Windsor	1
Chatham	3	Kenora	1
Hamilton	8	North Bay	1
Lindsay	1	Perry Sound	4
London	3	Sudbury	3
Walkerton	1		
		Total	59

Offences for which prisoners were committed and sentenced during the year.

A. CRIMES AGAINST THE PERSON

	COMMITMENTS			SENTENCES		
	Male	Female	Total	Male	Female	Total
Abduction	9	3	12	5	....	5
Abortion	12	9	21	4	2	6
Assault, Common	898	21	919	622	13	635
Assault, Felonious	230	8	238	162	2	164
Attempted Suicide	44	21	65	19	11	30
Cutting and wounding and attempting same	33	7	40	19	3	22
Shooting with intent	5	....	5	2	....	2
Stabbing	1	....	1	1	....	1
Manslaughter	42	2	44	7	....	7
Murder	13	5	18	5	1	6
Carnal Knowledge	75	....	75	51	....	51
Rape and Assault with intent to rape	28	....	28	14	....	14
Total	1,390	76	1,466	911	32	943

B. CRIMES AGAINST PROPERTY

	COMMITMENTS			SENTENCES		
	Male	Female	Total	Male	Female	Total
Arson and Incendiarism	73	9	82	42	4	46
Break, Enter and Theft	1,762	11	1,773	1,402	3	1,405
Robbery	300	13	313	182	6	188
Forgery	196	8	204	168	5	173
Fraud	442	24	466	344	17	361
False Pretenses	566	38	604	464	35	499
Larceny and Theft	3,785	129	3,914	3,039	92	3,131
Theft of Cars	521	2	523	401	1	402
Taking without owners consent	125	....	125	118	1	119
Receiving stolen goods	473	20	493	344	12	356
Trespass	486	7	493	415	6	421
Total	8,729	261	8,990	6,919	182	7,101

Offences for which prisoners were committed and sentenced during the year.

C. CRIMES AGAINST PUBLIC MORALS AND DECENCY

	COMMITMENTS			SENTENCES		
	Male	Female	Total	Male	Female	Total
Bigamy	28	5	33	22	3	25
Indecent Assault	147	....	147	92	....	92
Indecent Exposure	96	8	104	75	3	78
Incest	18	....	18	13	....	13
Inmates and frequenters of Houses of ill-fame	74	44	118	48	15	63
Keeping Houses of ill-fame	58	49	107	39	21	60
Juvenile Delinquency	148	38	186	81	22	103
Perjury	43	2	45	31	1	32
Prostitution	....	11	11	....	11	11
Seduction	21	....	21	10	....	10
Buggery	34	....	34	19	....	19
Total	667	157	824	430	76	506

D. CRIMES AGAINST PUBLIC ORDER AND PEACE

	COMMITMENTS			SENTENCES		
	Male	Female	Total	Male	Female	Total
Breaches of the Liquor Control Act	5,398	236	5,634	4,855	181	5,036
Breaches of the Excise Act	168	7	175	125	3	128
Breaches of the Narcotic and Drug Act	93	8	101	66	4	70
Breaches of the By-Laws (Do not include B.L.C.A.)	355	5	360	337	3	340
Breaches of the Highways Traffic Act	921	6	927	756	4	760
Carrying unlawful weapons	138	1	139	105	1	106
Cruelty to animals	32	....	32	28	....	28
Drunk and Disorderly (Do not include B.L.C.A.)	7,227	439	7,666	6,757	383	7,140
Drunk driving an Automobile	1,335	13	1,348	1,093	10	1,103
Escaping from Constable	7	1	8	6	....	6
Escaping from prison or gaol	27	5	32	17	....	17
Gambling	301	....	301	187	....	187
Obstructing an Officer	141	6	147	106	4	110
Selling or giving liquor to Indians (Do not include B.L.C.A.)	163	16	179	155	14	169
Vagrancy	3,961	307	4,268	2,781	177	2,958
Total	20,267	1,050	21,317	17,374	784	18,158
E. OTHER OFFENCES NOT ENUMERATED ABOVE	2,109	208	2,317	1,146	72	1,218
GRAND TOTAL (Totals of A, B, C, D, and E)	33,162	1,752	34,914	26,780	1,146	27,926

CITY and COUNTY GAOLS	Names of Officials			
	Sheriffs	Gaolers	Chief Matrons	Chief Turnkeys
Barrie	E. C. Drury	E. M. Garrity	Mrs. E. Garrity	J. R. Weymouth
Belleville	J. D. O'Flynn	G. H. French	" E. French	Jos. Semain
Brampton	F. S. Hutchinson	W. A. Partridge	" H. Partridge	Jas. Young
Brantford	C. S. Tapscott	J. Cook	" E. Cook	H. Slaught
Brockville	A. J. Traill	J. A. McLean	" M. McLean	J. Harrison
		F. J. Heffernan	" E. M. Heffernan	
Cayuga	R F. Miller	J. B. Smith	" A. Smith	W. J. Spittal
Chatham	E. W. Hardy	P. J. Daigneau	" G. Daigneau	Wm. Henley
Cobourg	J. T. Field	F. J. Wright	" V. Wright	I. Palen
Cornwall	A. I. Macdonnell	R. A. Cook	" B. Dickey	J. Cowhey
		J. S. Dickey		
Goderich	Robt. Johnston	J. B. Reynolds	" J. Reynolds	K. White
Guelph	H. C. Waind	J. Clarke	" J. Clarke	J. Borland
Hamilton*	J. W. Lawrason	F. V. Lalonde	" E. Lalonde	T. J. Hickmott
Kingston	F. R. Davies	J. T. Hawkey	" G. Hawkey	N. Sleeth
Kitchener	G. H. Gillies	E. Langridge	" V. Langridge	R. Schultz
Lindsay	J. Forman	H. W. Stone	" E. Stone	C. A. Grozelle
London	D. A. Graham	C. H. Mitchell	" J. North	W. K. Gray
L'Orignal	A. Landriault	A. Gelineau	" A. Gelineau	E. Seguin
Milton	Wm. Anderson	F. McNiven	" R. McNiven	C. J. Fleming
Napanee	J. L. Haycock	W. H. Roe	" W. Roe	G. McCabe
Orangeville	T. K. Slack	W. C. Barber	" G. Barber	W. R. Campbell
Ottawa	S. Crooks	A. G. Dawson	" M. Connell	A. Nicol
Owen Sound	T. J. Rutherford	T. A. Ramage	" J. Ramage	S. H. Guardhouse
Pembroke	Alex Morris	A. G. Brown	" M. Brown	C. Poupore
Perth	J. S. L. McNeely	W. R. Somerville	" W. Somerville	A. E. Manson
Peterboro	J. A. Harstone	T. D. Johnston	" S. Johnston	S. D. Johnston
Picton	A. E. Bowerman	W. McWilliams	" V. McWilliams	E. Rist
St. Catharines	F. J. Graves	J. J. Dundas	" L. Dundas	A. V. Bracken
St. Thomas	I. D. Cameron	C. P. Ermatinger	" R. Donaldson	R. B. Donaldson
Sarnia	A. J. Johnston	E. J. Mott	" E. Mott	G. Gilbert
Simcoe	A. C. Pratt	G. Mercel	" J. Mercel	H. Eames
Stratford	H. D. Lang	A. T. Trethewy	" A. Trethewy	G. Hickman
Toronto*	W. H. Cane	H. G. Denning	" M. Peers	A. Edwards
Walkerton	H. A. McGillivray	A. E. Furguson	" M. Ferguson	A. T. McDougall
Welland	V. L. Davidson	D. Sharpe	" D. Stewart	C. Stewart
Whitby	H. Bascom	H. F. Lucas	" H. Lucas	W. Pellow
Windsor	A. A. Marentette	J. W. Warden	" J. Warden	J. T. Morkin
Woodstock	C. E. Sutherland	J. L. Skinner	" G. Skinner	M. Hamilton
DISTRICT GAOLS				
Bracebridge	C. S. Salmon	C. Reynolds	Mrs. C. Reynolds	
Fort Frances	W. P. Pilkey	J. E. King	" J. King	J. Miller
Gore Bay	W. I. Wagg	R. McDermid	" R. McDermid	
Haileybury	H. Clifford	A. T. Humphreys	" A. Terrill	J. B. Anderson
Kenora	L. D. MacCallum	E. W. Cox	" F. Cox	H. R. Warner
North Bay	A. B. Girard	E. J. Turner	" F. Valin	Wm. Rayner
Parry Sound	J. E. Armstrong	T. W. Keating	" T. Keating	W. J. Tait
Port Arthur	H. Thompson	G. F. Lasseter	" G. Lasseter	C. M. Smith
Sault Ste. Marie	R. E. Stone	R. M. Hearst	" M. Hearst	W. Johnson
Sudbury	M Arthur	W. H. O'Leary	" W. O'Leary	R. Cornthwaite

* City Gaols.

CITY and COUNTY GAOLS		Salaries of Officials				
	Gaol Surgeons	Gaolers	Matrons	Other Officers	Surgeons	Total
Barrie	Dr. Wm. Little	$1,200.00	$ 400.00	$2,232.50	$ 385.00	$4,217.50
Belleville	" W. C. Morgan	700.00	400.00	1,820.00	500.00	3,420.00
Brampton	" D. C. Heggie	765.00	250.00	1,247.00	100.00	2,362.00
Brantford	" R. H. Palmer	1,500.00	500.00	4,911.00	300.00	7,211.00
Brockville	" E. B. Moles	479.16	111.83	1,976.30	150.00	3,279.77
		479.16	83.32			
Cayuga	" D. R. Weylie	1,000.00	180.00	942.00	160.00	2,282.00
Chatham	" J. A. Ferguson	1,100.00	400.00	3,727.50	350.00	5,577.50
Cobourg	" A. R. Richards	1,000.00	200.00	1,119.50	327.00	2,646.50
Cornwall	" A. R. Alguire	220.16	234.17	4,565.51	385.65	6,654.38
		1,248.89				
Goderich	" A. H. Taylor	1,000.00	225.00	1,492.63	125.00	2,842.63
Guelph	" A. B. McCarter	1,000.00	300.00	3,020.00	200.00	4,520.00
Hamilton*	" T. C. Gibson	2,000.00	700.00	15,878.00	1,000.00	19,578.00
Kingston	" P. H. Huyck	1,350.00	240.00	2,457.50	350.00	4,397.50
Kitchener	" G. D. McTaggart	1,200.00	400.00	2,844.00	500.00	4,944.00
Lindsay	" M. F. White	1,200.00	240.00	1,478.50	150.00	3,068.50
London	" D. H. Hogg	1,620.00	750.00	10,670.10	700.00	13,740.10
L'Orignal	" R. Laviolette	900.00	270.00	987.00	250.00	2,407.00
Milton	" C. K. Stevenson	900.00	250.00	990.63	100.00	2,240.63
Napanee	" T. M. Galbraith	1,000.00	200.00	1,057.50	200.00	2,457.50
Orangeville	" J. W. Leach	1,200.00	300.00	1,640.29	125.00	3,265.29
Ottawa	" J. F. Argue	2,300.00	650.00	14,069.50	705.00	17,724.50
Owen Sound	" R. Howey	1,200.00	300.00	1,926.00	250.00	3,676.00
Pembroke	" A. J. Sparling	1,700.00	225.00	1,215.00	100.00	3,240.00
Perth	" A. C. Fowler	1,000.00	200.00	1,199.53	500.00	2,899.53
Peterboro	" J. A. Morgan	1,000.00	300.00	1,521.00	200.00	3,021.00
Picton	" G. Allison	700.00	200.00	396.25	150.00	1,446.25
St. Catharines	" L. H. Werden	1,100.00	300.00	2,195.00	135.00	3,730.00
St. Thomas	" D. L. Ewin	1,420.00	....	2,637.14	316.50	4,373.64
Sarnia	" W. B. Rutherford	1,075.00	400.00	2,661.00	300.00	4,436.00
Simcoe	" K. McIntosh	840.00	250.00	1,938.50	352.00	3,380.50
Stratford	" M. J. Fraser	1,100.00	450.00	1,690.49	150.00	3 390.49
Toronto*	" J. Chassels	2,900.00	1,284.80	56,391.55	1,500.00	62,076.35
Walkerton	" W. A. Hall	900.00	200.00	1,253.60	150.00	2,503.60
Welland	" M. McLean	1,620.00	250.00	3,543.50	342.00	5,755.50
Whitby	" C. F. McGillivray	850.00	250.00	2,903.50	243.00	4,246.50
Windsor	" C. J. Hemond	1,500.00	600.00	11,712.42	800.00	14.612.42
Woodstock	" C. W. McKay	1,000.00	300.00	1,918.00	200.00	3,418.00
DISTRICT GAOLS						
Bracebridge	Dr. E. G. Ellis	1,300.00	200.00	286.00	150.00	1,936.00
Fort Frances	" W. G. Boyle	1,700.00	300.00	2,168.75	200.00	4,368.75
Gore Bay	" A. F. Strain	1,300.00	300.00	180.00	200.00	1,980.00
Haileybury	" W. C. Arnold	1,800.00	500.00	8,919.75	400.00	11,619.75
Kenora	" W. J. Gunne	1,700.00	300.00	5,771.83	200.00	7,971.83
North Bay	" E. J. Brennen	1,900.00	450.00	8,385.05	300.00	11,035.05
Parry Sound	" M. H. Limbert	1,400.00	300.00	2,325.00	150.00	4,175.00
Port Arthur	" W. W. Smith	2,000.00	400.00	12,500.00	400.00	15,300.00
Sault Ste. Marie	" S. E. Fleming	1,800.00	400.00	3,825.00	300.00	6,325.00
Sudbury	" W. C. Morrison	2,100.00	500.00	9,454.00	720.00	12,774.00

TABLE
MOVEMENT OF

CITY and COUNTY GAOLS	Number Remaining in custody on remand Mar. 31st, 1938			Number Remaining in custody awaiting trial Mar. 31st, 1938			Number Remaining in custody serving unexpired sentences or for other reasons Mar. 31st, 1938			Number Committed during the year ending March 31st, 1939		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Barrie	7	.....	7	.....	.....	.....	12	.....	12	386	9	395
Belleville	6	.....	6	.....	.....	.....	18	1	19	555	18	573
Brampton	1	.....	1	1	.....	1	2	.....	2	163	9	172
Brantford	4	1	5	.....	.....	.....	17	1	18	493	20	513
Brockville	2	.....	2	.....	.....	.....	8	3	11	346	15	361
Cayuga	.....	.....	.....	1	.....	1	3	1	4	111	11	122
Chatham	4	.....	4	1	.....	1	24	.....	24	619	25	644
Cobourg	.....	.....	.....	.....	.....	.....	13	.....	13	322	13	335
Cornwall	3	.....	3	1	.....	1	32	.....	32	408	18	426
Goderich	1	.....	1	.....	.....	.....	6	.....	6	89	13	102
Guelph	1	.....	1	.....	.....	.....	23	2	25	457	18	475
Hamilton*	22	1	23	.....	.....	.....	77	1	78	1,800	144	1,944
Kingston	.....	1	1	2	.....	2	19	.....	19	394	4	398
Kitchener	4	1	5	.....	.....	.....	19	.....	19	544	27	571
Lindsay	.....	.....	.....	.....	.....	.....	5	.....	5	104	3	107
London	4	.....	4	3	.....	3	43	2	45	1,244	88	1,332
L'Orignal	.....	1	1	1	.....	1	8	.....	8	160	14	174
Milton	.....	.....	.....	.....	.....	.....	2	.....	2	141	6	147
Napanee	1	.....	1	.....	.....	.....	4	.....	4	103	3	106
Orangeville	.....	.....	.....	1	.....	1	.....	.....	.....	45	1	46
Ottawa	18	.....	18	.....	.....	.....	70	.....	70	2,508	74	2,582
Owen Sound	.....	.....	.....	.....	.....	.....	13	.....	13	219	8	227
Pembroke	2	.....	2	.....	.....	.....	14	.....	14	281	2	283
Perth	.....	.....	.....	3	.....	3	4	.....	4	212	6	218
Peterboro	1	.....	1	.....	.....	.....	19	.....	19	347	13	360
Picton	1	.....	1	.....	.....	.....	2	.....	2	93	3	96
St. Catharines	.....	.....	.....	.....	.....	.....	15	.....	15	330	2	332
St. Thomas	3	.....	3	.....	.....	.....	14	.....	14	332	5	337
Sarnia	.....	.....	.....	1	.....	1	15	.....	15	291	15	306
Simcoe	2	.....	2	.....	.....	.....	6	.....	6	365	16	381
Stratford	1	.....	1	.....	.....	.....	12	.....	12	183	6	189
Toronto*	49	5	54	8	1	9	154	13	167	10,474	723	11,197
Walkerton	2	1	3	4	.....	4	7	.....	7	171	5	176
Welland	12	.....	12	1	.....	1	36	.....	36	847	24	871
Whitby	7	.....	7	1	.....	1	20	.....	20	393	10	403
Windsor	14	1	15	.....	.....	.....	39	.....	39	1,198	39	1,237
Woodstock	.....	.....	.....	.....	.....	.....	7	.....	7	278	10	288
DISTRICT GAOLS												
Bracebridge	.....	.....	.....	.....	.....	.....	2	.....	2	91	3	94
Fort Frances	.....	.....	.....	4	1	5	5	.....	5	173	8	181
Gore Bay	.....	.....	.....	1	.....	1	2	.....	2	49	7	56
Haileybury	.....	.....	.....	3	.....	3	74	3	77	1,168	48	1,216
Kenora	2	1	3	.....	.....	.....	35	.....	35	377	23	400
North Bay	3	.....	3	.....	.....	.....	33	1	34	710	31	741
Parry Sound	.....	.....	.....	2	.....	2	5	.....	5	203	9	212
Port Arthur	5	.....	5	7	.....	7	112	3	115	1,223	87	1,310
Sault Ste. Marie	5	.....	5	2	.....	2	27	.....	27	392	16	408
Sudbury	5	.....	5	1	.....	1	103	1	104	1,770	100	1,870
Totals	192	13	205	49	2	51	1,180	32	1,212	33,162	1,752	34,914

* City Gaols.

No. 1.

GAOL POPULATION.

CITY and COUNTY GAOLS	Total number in custody during year			Number Discharged on bail			Number Acquitted and discharged			Number Discharged by order of judge of court without trial		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Barrie	405	9	414	41	1	42	49	3	52	.....	....	.....
Belleville	579	19	598	53	1	54	54	4	58	15	....	15
Brampton	167	9	176	2	...	2	19	1	20	6	1	7
Brantford	514	22	536	45	3	48	49	4	53	2	....	2
Brockville	356	18	374	10	3	13	21	....	21	4	1	5
Cayuga	115	12	127	22	...	22	6	....	6	.....	....	.....
Chatham	648	25	673	25	...	25	48	6	54	.....	....	.....
Cobourg	335	13	348	28	4	32	19	1	20	9	....	9
Cornwall	444	18	462	4	2	6	3	....	3	4	....	4
Goderich	96	13	109	26	1	27	2	3	5	.....	....	.....
Guelph	481	20	501	49	4	53	36	....	36	.....	....	.....
Hamilton*	1,899	146	2,045	49	2	51	232	35	267	17	17	34
Kingston	415	5	420	4	...	4	26	1	27	.....	....	.....
Kitchener	567	28	595	10	1	11	86	5	91	3	....	3
Lindsay	109	3	112	1	...	1	8	....	8	.....	....	.....
London	1,294	90	1,384	52	3	55	176	20	196	9	1	10
L'Orignal	169	15	184	8	1	9	5	1	6	4	....	4
Milton	143	6	149	1	1	2	21	2	23	2	....	2
Napanee	108	3	111	11	...	11	2	1	3	.....	....	.....
Orangeville	46	1	47	5	...	5	1	....	1	1	....	1
Ottawa	2,596	74	2,670	102	8	110	325	15	340	45	1	46
Owen Sound	232	8	240	11	...	11	19	....	19	.....	....	.....
Pembroke	297	2	299	7	...	7	3	....	3	1	....	1
Perth	219	6	225	1	...	1	9	....	9	7	1	8
Peterboro	367	13	380	1	...	1	22	1	23	1	....	1
Picton	96	3	99	2	...	2	6	....	6	.....	....	.....
St. Catharines	345	2	347	.....	...	.....	39	....	39	.....	....	.....
St. Thomas	349	5	354	24	...	24	12	....	12	6	....	6
Sarnia	307	15	322	17	3	20	3	....	3	25	2	27
Simcoe	373	16	389	69	3	72	....	....	......	1	....	1
Stratford	196	6	202	8	1	9	....	....	......	1	....	1
Toronto*	10,685	742	11,427	1,347	135	1,482	....	....	......	900	96	996
Walkerton	184	6	190	25	...	25	10	....	10	1	....	1
Welland	896	24	920	81	8	89	34	4	38	1	....	1
Whitby	421	10	431	30	1	31	27	2	29	3	....	3
Windsor	1,251	40	1,291	94	4	98	54	13	67	13	....	13
Woodstock	285	10	295	41	2	43	15	1	16	.....	....	.....
DISTRICT GAOLS												
Bracebridge	93	3	96	1	...	1	9	....	9	.....	....	.....
Fort Frances	182	9	191	14	1	15	13	1	14	1	....	1
Gore Bay	52	7	59	1	...	1	2	....	2	.....	....	.....
Haileybury	1,245	51	1,296	14	...	14	24	3	27	6	....	6
Kenora	414	24	438	7	1	8	48	7	55	2	....	2
North Bay	746	32	778	15	1	16	48	3	51	6	....	6
Parry Sound	210	9	219	18	1	19	16	1	17	.....	....	.....
Port Arthur	1,347	90	1,437	1	...	1	51	4	55	.....	....	.....
Sault Ste. Marie	426	16	442	1	...	1	1	....	1	73	4	77
Sudbury	1,879	101	1,980	140	26	166	5	1	6	64	13	77
Totals	34,583	1,799	36,382	2,518	222	2,740	1,658	143	1,801	1,233	137	1,370

TABLE
MOVEMENT OF

CITY and COUNTY GAOLS	Number who Paid option of fine and were discharged			Number Discharged on suspended sentences			Number Discharged for any other reason		
	M.	F.	T.	M.	F.	T	M.	F.	T.
Barrie	25	......	25	13	......	13	6	1	7
Belleville	34	2	36	27	......	27	......	......	......
Brampton	30	......	30	7	4	11	13	1	14
Brantford	4	......	4	19	1	20	9	2	11
Brockville	31	1	32	17	1	18	3	......	3
Cayuga	13	1	14	21	1	22	......	......	......
Chatham	17	......	17	84	4	88	14	......	14
Cobourg	24	2	26	66	1	67	5	......	5
Cornwall	38	5	43	24	4	28	45	3	48
Goderich	3	......	3	10	2	12	......	......	......
Guelph	57	4	61	5	......	5	3	......	3
Hamilton*	81	5	86	123	17	140	......	......	......
Kingston	18	......	18	18	1	19	22	1	23
Kitchener	44	4	48	54	6	60	2	......	2
Lindsay	7	......	7	9	1	10	10	1	11
London	52	6	58	87	3	90	63	1	64
L'Orignal	6	......	6	5	1	6	9	2	11
Milton	10	......	10	20	2	22	12	......	12
Napanee	12	......	12	12	......	12	15	......	15
Orangeville	1	......	1	1	......	1	11	......	11
Ottawa	46	......	46	120	10	130	15	2	17
Owen Sound	7	......	7	12	......	12	3	......	3
Pembroke	16	......	16	7	......	7	33	1	34
Perth	8	......	8	15	......	15	......	......	......
Peterboro	21	1	22	18	5	23	2	......	2
Picton	2	......	2	15	1	16	6	......	6
St. Catharines	19	......	19	21	......	21	1	......	1
St. Thomas	16	......	16	13	......	13	23	1	24
Sarnia	27	1	28	20	1	21	2	......	2
Simcoe	59	......	59	48	4	52	50	4	54
Stratford	6	......	6	20	......	20	22	3	25
Toronto*	278	26	304	1,910	169	2,079	76	11	87
Walkerton	1	......	1	8	......	8	......	......	......
Welland	26	2	28	42	......	42	16	1	17
Whitby	10	......	10	22	2	24	4	......	4
Windsor	49	4	53	108	3	111	42	1	43
Woodstock	14	1	15	15	1	16	......	......	......
DISTRICT GAOLS									
Bracebridge	2	......	2	3	1	4	3	......	3
Fort Frances	45	3	48	17	3	20	1	......	1
Gore Bay	3	......	3	6	......	6	......	......	......
Haileybury	8	3	11	6	......	6	9	2	11
Kenora	10	......	10	10	4	14	5	......	5
North Bay	43	3	46	22	3	25	20	......	20
Parry Sound	40	......	40	9	......	9	......	......	......
Port Arthur	115	15	130	32	5	37	3	......	3
Sault Ste. Marie	24	......	24	......	......	......	2	......	2
Sudbury	154	10	164	35	2	37	66	6	72
Totals	1,556	99	1,655	3,176	263	3,439	646	44	690

* City gaols.

No. 1 (Continued).

GAOL POPULATION.

CITY and COUNTY GAOLS	Number Discharged on expiration of sentence			Number Transferred to Other Institutions			Number Sentenced and deported direct from gaol		
	M.	F.	T.	M.	F.	T.	M.	F.	T.
Barrie	173	3	176	71	1	72			
Belleville	292	5	297	63	7	70			
Brampton	59	2	61	25		25			
Brantford	312	9	321	48	2	50	1		1
Brockville	220	10	230	32	1	33			
Cayuga	28	8	36	20	2	22			
Chatham	368	6	374	68	9	77			
Cobourg	119		119	46	5	51			
Cornwall	251	1	252	57	3	60	2		2
Goderich	38	2	40	12	4	16			
Guelph	227	6	233	80	6	86			
Hamilton*	873	32	905	418	32	450	3		3
Kingston	242	1	243	54	1	55	1		1
Kitchener	245		245	93	12	105			
Lindsay	52	1	53	19		19			
London	669	48	717	127	6	133			
L'Orignal	76	7	83	46	3	49			
Milton	50		50	22	1	23			
Napanee	39		39	11	2	13			
Orangeville	12	1	13	9		9			
Ottawa	1,659	27	1,686	193	9	202			
Owen Sound	124	2	126	45	6	51			
Pembroke	183		183	36	1	37			
Perth	147	3	150	18	2	20			
Peterboro	265	5	270	23		23			
Picton	54		54	2	1	3			
St. Catharines	197	1	198	48	1	49			
St. Thomas	218	2	220	21	2	23			
Sarnia	139	5	144	48	3	51			
Simcoe	103	2	105	37	2	39			
Stratford	102	1	103	20	1	21			
Toronto*	2,408	212	2,620	3,586	80	3,666	6	1	7
Walkerton	104	5	109	29	1	30			
Welland	550	1	551	100	7	107	1		1
Whitby	219	3	222	81	2	83	1		1
Windsor	734	5	739	109	9	118	5		5
Woodstock	131	2	133	54	2	56	1		1
DISTRICT GAOLS									
Bracebridge	47	1	48	26		26			
Fort Frances	61	1	62	14		14			
Gore Bay	31	6	37	7	1	8			
Haileybury	712	21	733	385	17	402	2	1	3
Kenora	269	7	276	29	3	32			
North Bay	362	8	370	179	11	190	1		1
Parry Sound	83	4	87	33	3	36			
Port Arthur	900	34	934	148	23	171	3		3
Sault Ste. Marie	226	2	228	51	7	58			
Sudbury	980	16	996	299	19	318			
Totals	15,353	518	15,871	6,942	310	7,252	27	2	29

TABLE
MOVEMENT OF

CITY and COUNTY GAOLS	Died before trial			Died while undergoing sentence			Escaped and not recaptured during year			Number remaining in custody on remand March 31st, 1939		
	M.	F.	T.	M	F.	T.	M.	F.	T.	M.	F.	T.
Barrie										1		1
Belleville										3		3
Brampton										1		1
Brantford										7		7
Brockville												
Cayuga										1		1
Chatham										4		4
Cobourg												
Cornwall							2		2	1		1
Goderich										2	1	3
Guelph										1		1
Hamilton*										7	5	12
Kingston										1		1
Kitchener										4		4
Lindsay										1		1
London										10	1	11
L'Orignal										2		2
Milton												
Napanee										4		4
Orangeville												
Ottawa										9	2	11
Owen Sound												
Pembroke										1		1
Perth				1		1						
Peterboro												
Picton										1		1
St. Catharines										1		1
St. Thomas										3		3
Sarnia				1		1				3		3
Simcoe										4		4
Stratford										6		6
Toronto*										38	3	41
Walkerton												
Welland										3		3
Whitby										2		2
Windsor										8	1	9
Woodstock										1		1
DISTRICT GAOLS												
Bracebridge												
Fort Frances										2		2
Gore Bay												
Haileybury				1		1						
Kenora					1	1				1		1
North Bay										2	2	4
Parry Sound												
Port Arthur										8		8
Sault Ste. Marie										6		6
Sudbury										3		3
Totals				3	1	4	2		2	152	15	167

* City Gaols.

No. 1 (Concluded).

GAOL POPULATION

CITY and COUNTY GAOLS	Number remaining in custody awaiting trial March 31st, 1939			Number remaining in custody serving unexpired sentences or for other reasons March 31st, 1939			Total		
	M.	F.	T.	M.	F.	T.	Male	Female	Total
Barrie	1	......	1	25	......	25	405	9	414
Belleville	......	......	......	38	......	38	579	19	598
Brampton	1	......	1	4	......	4	167	9	176
Brantford	......	......	......	18	1	19	514	22	536
Brockville	......	......	......	18	1	19	356	18	374
Cayuga	1	......	1	3	......	3	115	12	127
Chatham	......	......	......	20	......	20	648	25	673
Cobourg	4	......	4	15	......	15	335	13	348
Cornwall	1	......	1	12	......	12	444	18	462
Goderich	......	......	......	3	......	3	96	13	109
Guelph	1	......	1	22	......	22	481	20	501
Hamilton*	7	......	7	89	1	90	1,899	146	2,045
Kingston	......	......	......	29	......	29	415	5	420
Kitchener	......	......	......	26	......	26	567	28	595
Lindsay	......	......	......	2	......	2	109	3	112
London	......	......	......	49	1	50	1,294	90	1,384
L'Orignal	......	......	......	8	......	8	169	15	184
Milton	......	......	......	5	......	5	143	6	149
Napanee	......	......	......	2	......	2	108	3	111
Orangeville	......	......	......	5	......	5	46	1	47
Ottawa	4	......	4	78	......	78	2,596	74	2,670
Owen Sound	......	......	......	11	......	11	232	8	240
Pembroke	......	......	......	10	......	10	297	2	299
Perth	1	......	1	12	......	12	219	6	225
Peterboro	......	......	......	14	1	15	367	13	380
Picton	......	......	......	8	1	9	96	3	99
St. Catharines	1	......	1	18	......	18	345	2	347
St. Thomas	......	......	......	13	......	13	349	5	354
Sarnia	......	......	......	22	......	22	307	15	322
Simcoe	......	......	......	2	1	3	373	16	389
Stratford	......	......	......	11	......	11	196	6	202
Toronto*	24	1	25	112	8	120	10,685	742	11,427
Walkerton	......	......	......	6	......	6	184	6	190
Welland	......	......	......	42	1	43	896	24	920
Whitby	......	......	......	22	......	22	421	10	431
Windsor	......	......	......	35	......	35	1,251	40	1,291
Woodstock	......	......	......	13	1	14	285	10	295
DISTRICT GAOLS									
Bracebridge	......	......	......	2	1	3	93	3	96
Fort Frances	1	......	1	13	......	13	182	9	191
Gore Bay	......	......	......	2	......	2	52	7	59
Haileybury	5	......	5	73	4	77	1,245	51	1,296
Kenora	1	......	1	32	1	33	414	24	438
North Bay	......	......	......	48	1	49	746	32	778
Parry Sound	1	......	1	10	......	10	210	9	219
Port Arthur	......	......	......	86	9	95	1,347	90	1,437
Sault Ste. Marie	1	......	1	41	3	44	426	16	442
Sudbury	1	1	2	132	7	139	1,879	101	1,980
Totals	56	2	58	1,261	43	1,304	34,583	1,799	36,382

TABLE

Criminal History, Number
and Number

CITY and COUNTY GAOLS	Criminal History of Those Committed							
	First Time		Second Time		Third Time		Over Three Times	
	Male	Female	Male	Female	Male	Female	Male	Female
Barrie	201	9	78	....	38	....	69	....
Belleville	341	15	101	3	66	....	47	....
Brampton	82	5	46	3	20	1	15	....
Brantford	263	12	77	4	37	1	116	3
Brockville	188	12	47	3	28	....	83	....
Cayuga	106	10	5	1	....	....	....	....
Chatham	242	18	90	2	99	3	188	2
Cobourg	154	11	82	2	49	....	37	....
Cornwall	233	14	60	2	33	1	82	1
Goderich	48	8	13	4	7	1	21	....
Guelph	219	7	108	6	95	4	35	1
Hamilton*	745	78	260	21	146	10	649	35
Kingston	257	2	39	2	32	....	66	....
Kitchener	283	24	81	....	68	....	112	3
Lindsay	77	3	9	....	6	....	12	....
London	642	46	180	10	96	13	326	19
L'Orignal	84	10	37	2	17	2	22	....
Milton	98	6	15	....	9	....	19	....
Napanee	57	3	17	....	12	....	17	....
Orangeville	33	1	....	....	12	....	....	....
Ottawa	2,216	67	166	4	55	1	70	2
Owen Sound	118	6	40	2	17	....	44	....
Pembroke	240	2	19	....	10	....	12	....
Perth	45	3	29	3	11	....	127	....
Peterboro	232	11	31	2	33	....	51	....
Picton	39	3	17	....	8	....	29	....
St. Catharines	132	....	47	....	27	1	124	1
St. Thomas	141	1	72	2	42	....	77	2
Sarnia	125	7	62	5	50	1	54	2
Simcoe	219	14	59	1	40	1	47	....
Stratford	117	6	32	....	14	....	20	....
Toronto*	4,519	446	1,758	107	1,241	68	2,956	102
Walkerton	80	4	31	....	23	1	37	....
Welland	447	23	168	....	80	1	152	....
Whitby	262	6	72	1	37	2	22	1
Windsor	873	39	132	....	69	....	124	....
Woodstock	149	8	50	2	37	....	42	....
DISTRICT GAOLS								
Bracebridge	48	2	15	....	10	1	18	....
Fort Frances	106	6	32	1	17	1	18	....
Gore Bay	21	5	15	....	6	1	7	1
Haileybury	608	33	234	10	111	2	215	3
Kenora	291	21	69	....	17	2	9	....
North Bay	253	21	211	7	151	2	95	1
Parry Sound	192	8	6	1	4	....	1	....
Port Arthur	1,020	69	138	11	65	7	....	....
Sault Ste. Marie	166	12	79	3	67	....	80	1
Sudbury	677	68	474	25	342	7	277	....
Totals	17.689	1,185	5,394	252	3,455	135	6,624	180

No. 2.

Over and Under Sixteen
Committed.

CITY and COUNTY GAOLS	Under 16 years of Age			16 years of Age and over			Total number committed during Year		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Barrie	4		4	382	9	391	386	9	395
Belleville	1		1	554	18	572	555	18	573
Brampton	1		1	162	9	171	163	9	172
Brantford				493	20	513	493	20	513
Brockville	4		4	342	15	357	346	15	361
Cayuga				111	11	122	111	11	122
Chatham	13	3	16	606	22	628	619	25	644
Cobourg	6	1	7	316	12	328	322	13	335
Cornwall	2		2	406	18	424	408	18	426
Goderich	1	2	3	88	11	99	89	13	102
Guelph				457	18	475	457	18	475
Hamilton*	3		3	1,797	144	1,941	1,800	144	1,944
Kingston	1		1	393	4	397	394	4	398
Kitchener	6	3	9	538	24	562	544	27	571
Lindsay				104	3	107	104	3	107
London				1,244	88	1,332	1,244	88	1,332
L'Orignal		1	1	160	13	173	160	14	174
Milton				141	6	147	141	6	147
Napanee	3		3	100	3	103	103	3	106
Orangeville	2		2	43	1	44	45	1	46
Ottawa				2,508	74	2,582	2,508	74	2,582
Owen Sound	2		2	217	8	225	219	8	227
Pembroke				281	2	283	281	2	283
Perth	2		2	210	6	216	212	6	218
Peterboro				347	13	360	347	13	360
Picton	1		1	92	3	95	93	3	96
St. Catharines	5		5	325	2	327	330	2	332
St. Thomas				332	5	337	332	5	337
Sarnia	3	1	4	288	14	302	291	15	306
Simcoe	1		1	364	16	380	365	16	381
Stratford				183	6	189	183	6	189
Toronto*	1	2	3	10,473	721	11,194	10,474	723	11,197
Walkerton	2		2	169	5	174	171	5	176
Welland	3		3	844	24	868	847	24	871
Whitby	1		1	392	10	402	393	10	403
Windsor	18		18	1,180	39	1,219	1,198	39	1,237
Woodstock		1	1	278	9	287	278	10	288
DISTRICT GAOLS									
Bracebridge				91	3	94	91	3	94
Fort Frances	7	1	8	166	7	173	173	8	181
Gore Bay				49	7	56	49	7	56
Haileybury				1,168	48	1,216	1,168	48	1,216
Kenora	15		15	362	23	385	377	23	400
North Bay	5		5	705	31	736	710	31	741
Parry Sound	1		1	202	9	211	203	9	212
Port Arthur	10	1	11	1,213	86	1,299	1,223	87	1,310
Sault Ste. Marie	10		10	382	16	398	392	16	408
Sudbury	1	1	2	1,769	99	1,868	1,770	100	1,870
Totals	135	17	152	33,027	1,735	34,762	33,162	1,752	34,914

* City Gaols.

TABLE

Social Status and Habits of Prisoners Committed

CITY and COUNTY GAOLS	Married			Single			Could read and write		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Barrie	117	6	123	269	3	272	369	8	377
Belleville	219	7	226	336	11	347	555	18	573
Brampton	64	5	69	99	4	103	155	9	164
Brantford	162	14	176	331	6	337	487	18	505
Brockville	98	11	109	248	4	252	330	15	345
Cayuga	34	7	41	77	4	81	110	11	121
Chatham	227	14	241	392	11	403	595	24	619
Cobourg	91	10	101	231	3	234	316	13	329
Cornwall	137	11	148	271	7	278	342	17	359
Goderich	39	5	44	50	8	58	89	13	102
Guelph	159	13	172	298	5	303	448	18	466
Hamilton*	831	103	934	969	41	1,010	1,789	142	1,931
Kingston	139	4	143	255	....	255	389	4	393
Kitchener	158	13	171	386	14	400	544	27	571
Lindsay	43	2	45	61	1	62	100	3	103
London	435	50	485	809	38	847	1,240	87	1,327
L'Orignal	55	7	62	105	7	112	135	11	146
Milton	51	2	53	90	4	94	140	6	146
Napanee	44	1	45	59	2	61	94	3	97
Orangeville	18	1	19	27	....	27	45	....	45
Ottawa	660	25	685	1,848	49	1,897	2,415	74	2,489
Owen Sound	108	4	112	111	4	115	204	8	212
Pembroke	82	....	82	199	2	201	270	2	272
Perth	55	3	58	157	3	160	210	6	216
Peterboro	115	2	117	232	11	243	343	13	356
Picton	45	3	48	48	....	48	91	3	94
St. Catharines	106	1	107	224	1	225	327	2	329
St. Thomas	105	3	108	227	2	229	322	5	327
Sarnia	111	8	119	180	7	187	283	13	296
Simcoe	140	13	153	225	3	228	344	16	360
Stratford	55	3	58	128	3	131	181	6	187
Toronto*	3,302	484	3,786	7,172	239	7,411	10,376	697	11,073
Walkerton	68	3	71	103	2	105	170	5	175
Welland	198	12	210	649	12	661	824	22	846
Whitby	135	6	141	258	4	262	374	10	384
Windsor	394	26	420	804	13	817	1,148	36	1,184
Woodstock	102	3	105	176	7	183	271	10	281
DISTRICT GAOLS									
Bracebridge	26	2	28	65	1	66	84	3	87
Fort Frances	81	4	85	92	4	96	164	6	170
Gore Bay	30	3	33	19	4	23	33	5	38
Haileybury	291	29	320	877	19	896	1,105	46	1,151
Kenora	110	15	125	267	8	275	317	17	334
North Bay	244	15	259	466	16	482	556	19	575
Parry Sound	77	3	80	126	6	132	186	9	195
Port Arthur	223	42	265	1,000	45	1,045	1,206	86	1,292
Sault Ste. Marie	92	7	99	300	9	309	345	15	360
Sudbury	441	54	495	1,329	46	1,375	1,625	89	1,714
Totals	10,517	1,059	11,576	22,645	693	23,338	32,046	1,670	33,716

* City Gaols.

No. 3.

during the Year ending March 31st, 1939.

CITY and COUNTY GAOLS	Illiterate			Temperate			Intemporate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Barrie	17	1	18	266	9	275	120	....	120
Belleville	.....	....	....	359	13	372	196	5	201
Brampton	8	....	8	64	5	69	99	4	103
Brantford	6	2	8	184	13	197	309	7	316
Brockville	16	....	16	122	10	132	224	5	229
Cayuga	1	....	1	45	4	49	66	7	73
Chatham	24	1	25	361	18	379	258	7	265
Cobourg	6	....	6	116	5	121	206	8	214
Cornwall	66	1	67	79	8	87	329	10	339
Goderich	.....	....	....	54	13	67	35	....	35
Guelph	9	....	9	232	11	243	225	7	232
Hamilton*	11	2	13	775	98	873	1,025	46	1,071
Kingston	5	....	5	58	2	60	336	2	338
Kitchener	.....	....	....	275	20	295	269	7	276
Lindsay	4	....	4	52	3	55	52	....	52
London	4	1	5	369	25	394	875	63	938
L'Orignal	25	3	28	95	10	105	65	4	69
Milton	1	....	1	50	5	55	91	1	92
Napanee	9	....	9	31	2	33	72	1	73
Orangeville	.....	1	1	41	1	42	4	....	4
Ottawa	93	....	93	805	40	845	1,703	34	1,737
Owen Sound	15	....	15	48	8	56	171	....	171
Pembroke	11	....	11	44	1	45	237	1	238
Perth	2	....	2	65	6	71	147	....	147
Peterboro	4	....	4	184	13	197	163	....	163
Picton	2	....	2	28	2	30	65	1	66
St. Catharines	3	....	3	150	1	151	180	1	181
St. Thomas	10	....	10	265	3	268	67	2	69
Sarnia	8	2	10	175	7	182	116	8	124
Simcoe	21	....	21	133	5	138	232	11	243
Stratford	2	....	2	103	5	108	80	1	81
Toronto*	98	26	124	2,218	158	2,376	8,256	565	8,821
Walkerton	1	....	1	75	1	76	96	4	100
Welland	23	2	25	405	22	427	442	2	444
Whitby	19	....	19	174	5	179	219	5	224
Windsor	50	3	53	414	22	436	784	17	801
Woodstock	7	....	7	92	4	96	186	6	192
DISTRICT GAOLS									
Bracebridge	7	....	7	82	3	85	9	....	9
Fort Frances	9	2	11	97	4	101	76	4	80
Gore Bay	16	2	18	6	1	7	43	6	49
Haileybury	63	2	65	729	38	767	439	10	449
Kenora	60	6	66	200	18	218	177	5	182
North Bay	154	12	166	332	15	347	378	16	394
Parry Sound	17	....	17	50	1	51	153	8	161
Port Arthur	17	1	18	515	53	568	708	34	742
Sault Ste. Marie	47	1	48	79	7	86	313	9	322
Sudbury	145	11	156	201	38	239	1,569	62	1,631
Totals	1,116	82	1,198	11,297	756	12,053	21,865	996	22,861

TABLE

Prisoners Transferred

CITY and COUNTY GAOLS	Sentenced to Gaol and afterwards removed to a Reformatory		Sentenced to Gaol and afterwards removed to an Industrial Farm	Sentenced to and removed to a Reformatory		Sentenced to and removed to an Industrial Farm
	Male	Female	Male	Male	Female	Male
Barrie	5		1	27		20
Belleville				42	3	
Brampton	5		3	9		1
Brantford	13		14	3		
Brockville	21	1				
Cayuga	10	1				
Chatham				45	4	
Cobourg	3			26		
Cornwall	3		1	29	2	8
Goderich				2		
Guelph	9	1		50	2	
Hamilton*	127	8		213	22	
Kingston				36	1	
Kitchener				53	2	12
Lindsay				17		
London				96	3	
L'Orignal				37	2	3
Milton	3			13	1	3
Napanee	1			2	1	3
Orangeville				3		
Ottawa	7	1		105	7	45
Owen Sound				16	2	10
Pembroke				21	1	3
Perth				9		
Peterboro				19		
Picton	2	1				
St. Catharines	28	1				
St. Thomas	1		2	6		
Sarnia	30	2				
Simcoe				19		
Stratford				11		
Toronto*	2,701			456	70	231
Walkerton				18		
Welland	6	1		60	5	
Whitby				36		16
Windsor				48	4	16
Woodstock				17	1	7
DISTRICT GAOLS						
Bracebridge	4			11		3
Fort Frances	4			2		
Gore Bay			1			
Haileybury	25	1	267	22	4	3
Kenora				9	1	9
North Bay	6		21	42	7	60
Parry Sound	2			18	2	
Port Arthur		8	33		3	50
Sault Ste. Marie		1	10		3	20
Sudbury	9	10	216	12		
Totals	3,025	37	569	1,660	153	523

* City Gaols.

No. 4

To Other Institutions.

CITY and COUNTY GAOLS	Sentenced to and removed to a Penitentiary			Committed to and removed to Industrial Schools			Committed to and removed to an Industrial Refuge			Committed to and removed to other places of Confinement			Total		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	Male	Fem'l	Total
Barrie	2	....	2	....	....	....	....	....	....	16	1	17	71	1	72
Belleville	5	....	5	1	....	1	....	2	2	15	2	17	63	7	70
Brampton	3	....	3	1	....	1	....	....	....	3	....	3	25	....	25
Brantford	9	....	9	....	....	....	....	....	....	9	2	11	48	2	50
Brockville	10	....	10	....	....	....	....	....	....	1	....	1	32	1	33
Cayuga	8	....	8	....	....	....	....	....	....	2	1	3	20	2	22
Chatham	10	....	10	6	1	7	....	....	....	7	4	11	68	9	77
Cobourg	5	....	5	2	....	2	....	2	2	10	3	13	46	5	51
Cornwall	11	....	11	2	....	2	....	....	....	3	1	4	57	3	60
Goderich	2	....	2	....	....	....	....	3	3	8	1	9	12	4	16
Guelph	11	....	11	....	....	....	....	....	....	10	3	13	80	6	86
Hamilton*	76	....	76	1	....	1	....	2	2	1	....	1	418	32	450
Kingston	7	....	7	....	....	....	....	....	....	11	....	11	54	1	55
Kitchener	6	....	6	3	3	6	....	....	....	19	7	26	93	12	105
Lindsay	2	....	2	....	....	....	....	....	....	....	....	....	19	....	19
London	25	....	25	....	....	....	....	2	2	6	1	7	127	6	133
L'Orignal	1	....	1	....	....	....	....	1	1	5	....	5	46	3	49
Milton	2	....	2	1	....	1	....	....	....	....	....	....	22	1	23
Napanee	2	....	2	2	....	2	....	1	1	1	....	1	11	2	13
Orangeville	4	....	4	2	....	2	....	....	....	....	....	....	9	....	9
Ottawa	33	....	33	....	....	....	....	1	1	3	....	3	193	9	202
Owen Sound	6	....	6	....	....	....	....	....	....	13	4	17	45	6	51
Pembroke	10	....	10	....	....	....	....	....	....	2	....	2	36	1	37
Perth	7	....	7	2	....	2	....	....	....	....	2	2	18	2	20
Peterboro	3	....	3	....	....	....	....	....	....	1	....	1	23	....	23
Picton	....	....	....	....	....	....	....	....	....	....	....	....	2	1	3
St. Catharines	17	....	17	2	....	2	....	....	....	1	....	1	48	1	49
St. Thomas	8	....	8	....	....	....	....	....	....	4	2	6	21	2	23
Sarnia	6	....	6	2	....	2	....	....	....	10	1	11	48	3	51
Simcoe	10	....	10	....	....	....	....	....	....	8	2	10	37	2	39
Stratford	5	1	6	....	....	....	....	....	....	4	....	4	20	1	21
Toronto*	109	2	111	....	....	....	....	....	....	89	8	97	3,586	80	3,666
Walkerton	7	....	7	2	....	2	....	....	....	2	1	3	29	1	30
Welland	15	....	15	1	....	1	....	....	....	18	1	19	100	7	107
Whitby	10	....	10	....	....	....	....	....	....	19	2	21	81	2	83
Windsor	18	....	18	4	....	4	....	3	3	23	2	25	109	9	118
Woodstock	11	....	11	....	....	....	....	....	....	19	1	20	54	2	56
DISTRICT GAOLS															
Bracebridge	1	....	1	....	....	....	....	....	....	7	....	7	26	....	26
Fort Frances	3	....	3	2	....	2	....	....	....	3	....	3	14	....	14
Gore Bay	2	....	2	....	....	....	....	....	....	4	1	5	7	1	8
Haileybury	18	....	18	....	....	....	....	....	....	50	12	62	385	17	402
Kenora	1	....	1	5	....	5	....	....	....	5	2	7	29	3	32
North Bay	9	....	9	4	....	4	....	....	....	37	4	41	179	11	190
Parry Sound	7	....	7	....	....	....	....	....	....	6	1	7	33	3	36
Port Arthur	8	....	8	7	....	7	....	1	1	50	11	61	148	23	171
Sault Ste. Marie	11	....	11	1	....	1	....	....	....	9	3	12	51	7	58
Sudbury	17	....	17	2	1	3	....	....	....	43	8	51	299	19	318
Totals	553	3	556	55	5	60	...	18	18	557	94	651	6,942	310	7,252

TABLE

Period of Sentences—To Gaols,

CITY and COUNTY GAOLS	Suspended Sentences			Under 30 days			30 days and under 60 days			60 days or 2 months		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Barrie	16	.....	16	103	2	105	42	.....	42	27	1	28
Belleville	27	.....	27	226	2	228	31	4	35	45	...	45
Brampton	7	4	11	40	1	41	8	.....	8	18	1	19
Brantford	19	3	22	171	2	173	65	2	67	19	3	22
Brockville	17	1	18	188	3	191	48	3	51	12	2	14
Cayuga	21	1	22	54	7	61	3	1	4	4	...	4
Chatham	84	4	88	249	5	254	68	.....	68	25	...	25
Cobourg	68	.....	68	86	....	86	27	.....	27	9	...	9
Cornwall	29	5	34	186	4	190	45	1	46	15	...	15
Goderich	11	2	13	22	....	22	5	2	7	2	...	2
Guelph	5	.....	5	51	....	51	162	6	168	29	5	34
Hamilton*	118	16	134	480	27	507	268	23	291	120	5	125
Kingston	18	.....	18	162	....	162	47	.....	47	17	...	17
Kitchener	54	6	60	59	....	59	205	4	209	19	2	21
Lindsay	10	1	11	24	1	25	15	.....	15	5	1	6
London	86	3	89	509	36	545	124	12	136	44	5	49
L'Orignal	18	1	19	50	3	53	11	4	15	4	...	4
Milton	22	2	24	35	....	35	2	.....	2	8	...	8
Napanee	13	.....	13	32	....	32	6	.....	6	6	...	6
Orangeville	2	.....	2	9	1	10	3	.....	3	1	...	1
Ottawa	117	10	127	1,391	20	1,411	302	7	309	54	1	55
Owen Sound	12	1	13	68	....	68	26	.....	26	14	1	15
Pembroke	7	.....	7	121	....	121	34	.....	34	29	...	29
Perth	13	.....	13	111	2	113	24	1	25	19	...	19
Peterboro	18	5	23	204	5	209	45	.....	45	21	2	23
Picton	15	1	16	40	....	40	8	.....	8	4	...	4
St. Catharines	21	....	21	124	1	125	36	.....	36	19	...	19
St. Thomas	28	1	29	173	1	174	42	1	43	14	...	14
Sarnia	20	1	21	118	2	120	26	1	27	31	3	34
Simcoe	56	5	61	156	3	159	12	.....	12	2	...	2
Stratford	20	.....	20	65	1	66	21	.....	21	9	...	9
Toronto*	1,910	169	2,079	2,643	123	2,766	1,983	134	2,117	329	21	350
Walkerton	8	.....	8	48	4	52	32	1	33	8	...	8
Welland	39	.....	39	427	3	430	106	.....	106	32	...	32
Whitby	22	2	24	139	2	141	50	1	51	19	1	20
Windsor	112	3	115	593	7	600	98	1	99	40	...	40
Woodstock	15	1	16	96	3	99	26	.....	26	13	1	14
DISTRICT GAOLS												
Bracebridge	3	1	4	35	1	36	8	1	9	7	...	7
Fort Frances	17	3	20	60	2	62	18	1	19	13	...	13
Gore Bay	6	.....	6	19	6	25	12	.....	12	.....	...	.....
Haileybury	6	.....	6	105	2	107	627	8	635	78	4	82
Kenora	10	6	16	130	1	131	74	1	75	23	2	25
North Bay	45	3	48	242	7	249	70	2	72	46	...	46
Parry Sound	9	.....	9	73	3	76	21	1	22	10	..	10
Port Arthur	32	5	37	581	13	594	219	21	240	83	12	95
Sault Ste. Marie	2	.....	2	113	....	113	92	3	95	26	1	27
Sudbury	35	2	37	890	11	901	129	8	137	112	11	123
Totals	3,243	268	3,511	11,501	317	11,818	5,326	255	5,581	1,484	85	1,569

* City Gaols.

No. 5

Reformatories, Penitentiaries or Elsewhere.

CITY and COUNTY GAOLS	3 months			4 months			5 months			6 months and under 9 months		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Barrie	39	1	40	3	.....	3	.....	.....	.....	5	.....	5
Belleville	.....	.....	.....	3	.....	3	2	.....	2	4	1	5
Brampton	4	.....	4	.....	.....	.....	.....	.....	.....	3	.....	3
Brantford	40	3	43	2	.....	2	.....	.....	.....	9	1	10
Brockville	15	2	17	....	.....	.....	2	.....	2	4	1	5
Cayuga	....	1	1	1	.....	1	.....	.....	.....	.....	.....	.....
Chatham	35	1	36	3	.....	3	.....	.....	.....	.....	.....	.....
Cobourg	12	.....	12	7	.....	7	5	.....	5	7	2	9
Cornwall	31	1	32	1	.....	1	1	.....	1	17	1	18
Goderich	3	.....	3	1	.....	1	.....	.....	.....	1	.....	1
Guelph	33	.....	33	2	.....	2	1	.....	1	16	1	17
Hamilton*	135	7	142	30	3	33	6	.....	6	35	6	41
Kingston	48	1	49	3	.....	3	1	.....	1	6	1	7
Kitchener	7	.....	7	4	.....	4	.....	.....	.....	10	.....	10
Lindsay	13	.....	13	1	.....	1	1	.....	1	1	.....	1
London	55	2	57	4	.....	4	1	.....	1	16	1	17
L'Orignal	12	.....	12	2	.....	2	.....	.....	.....	5	1	6
Milton	3	.....	3	1	.....	1	.....	.....	.....	3	.....	3
Napanee	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Orangeville	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ottawa	11	.....	11	3	.....	3	8	3	11	3	.....	3
Owen Sound	14	.....	14	1	.....	1	.....	.....	.....	5	1	6
Pembroke	12	.....	12	3	.....	3	.....	.....	.....	2	.....	2
Perth	2	.....	2	1	.....	1	.....	.....	.....	2	.....	2
Peterboro	15	.....	15	.....	.....	.....	.....	.....	.....	2	.....	2
Picton	4	1	5	.....	.....	.....	.....	.....	.....	1	1	2
St. Catharines	40	.....	40	4	.....	4	1	.....	1	8	.....	8
St. Thomas	13	.....	13	.....	.....	.....	.....	.....	.....	5	.....	5
Sarnia	17	.....	17	.....	.....	.....	1	.....	1	1	.....	1
Simcoe	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stratford	11	.....	11	2	.....	2	1	.....	1	.....	.....	.....
Toronto*	411	9	420	74	1	75	9	.....	9	208	8	216
Walkerton	14	.....	14	1	.....	1	.....	.....	.....	1	.....	1
Welland	19	1	20	6	3	9	3	.....	3	13	3	16
Whitby	35	.....	35	5	.....	5	.....	.....	.....	4	.....	4
Windsor	65	3	68	5	.....	5	.....	.....	.....	6	1	7
Woodstock	11	.....	11	2	.....	2	.....	.....	.....	7	1	8
DISTRICT GAOLS												
Bracebridge	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fort Frances	11	1	12	5	.....	5	1	.....	1	6	.....	6
Gore Bay	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haileybury	143	12	155	7	1	8	1	.....	1	38	.....	38
Kenora	30	3	33	5	.....	5	2	.....	2	13	1	14
North Bay	50	3	53	5	.....	5	36	.....	36	42	1	43
Parry Sound	18	.....	18	5	....	5	3	.....	3	6	2	8
Port Arthur	74	10	84	18	.....	18	2	.....	2	45	7	52
Sault Ste. Marie	33	.....	33	3	2	5	.....	.....	.....	....	2	2
Sudbury	102	3	105	61	8	69	17	1	18	22	1	23
Totals	1,665	65	1,730	284	18	302	105	4	109	582	45	627

TABLE

Period of Sentences—To Gaols,

CITY and COUNTY GAOLS	9 months and under 12 months			12 months and under 18 months			18 months and under 24 months			Indeterminate with definite or other sentences		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Barrie	....	....	....	3	....	3	3	....	3	49	....	49
Belleville	....	....	....	....	....	....	2	....	2	37	4	41
Brampton	....	....	....	4	....	4	....	....	....	7	....	7
Brantford	....	....	....	2	1	3	2	....	2	20	....	20
Brockville	....	....	....	1	....	1	....	....	....	19	....	19
Cayuga	....	....	....	....	....	....	....	....	....	10	....	10
Chatham	....	....	....	1	....	1	4	....	4	55	9	64
Cobourg	....	....	....	8	....	8	....	....	....	14	....	14
Cornwall	3	....	3	7	....	7	6	1	7	11	1	12
Goderich	....	....	....	....	....	....	....	....	....	6	3	9
Guelph	1	....	1	6	1	7	1	....	1	29	....	29
Hamilton*	7	....	7	13	4	17	2	5	7	206	6	212
Kingston	....	....	....	7	....	7	2	....	2	11	....	11
Kitchener	1	....	1	31	....	31	15	....	15	13	3	16
Lindsay	....	....	....	3	....	3	1	....	1	11	....	11
London	1	....	1	18	1	19	10	....	10	58	3	61
L'Orignal	....	....	....	4	....	4	2	....	2	14	....	14
Milton	....	....	....	1	....	1	....	....	....	12	1	13
Napanee	....	....	....	....	....	....	....	1	1	9	1	10
Orangeville	....	....	....	....	....	....	1	....	1	5	....	5
Ottawa	1	2	3	1	....	1	2	3	5	151	3	154
Owen Sound	....	....	....	11	....	11	1	....	1	16	....	16
Pembroke	1	....	1	....	....	....	1	....	1	22	1	23
Perth	....	....	....	6	....	6	....	....	....	2	....	2
Peterboro	....	....	....	....	....	....	....	....	....	14	....	14
Picton	....	....	....	1	....	1	1	....	1	2	....	2
St. Catharines	2	....	2	9	....	9	6	1	7	3	....	3
St. Thomas	....	....	....	3	....	3	3	....	3	3	....	3
Sarnia	....	....	....	....	....	....	1	....	1	30	2	32
Simcoe	....	....	....	....	....	....	1	....	1	17	1	18
Stratford	....	....	....	....	....	....	....	....	....	11	....	11
Toronto*	57	1	58	138	2	140	41	1	42	226	2	228
Walkerton	....	....	....	1	....	1	1	....	1	14	....	14
Welland	1	....	1	10	....	10	....	....	....	44	....	44
Whitby	....	....	....	3	....	3	1	....	1	28	....	28
Windsor	1	....	1	4	....	4	....	1	1	60	3	63
Woodstock	....	....	....	10	....	10	4	....	4	8	....	8
DISTRICT GAOLS												
Bracebridge	....	....	....	....	....	....	....	....	....	13	....	13
Fort Frances	1	....	1	1	....	1	1	....	1	2	....	2
Gore Bay	....	....	....	....	....	....	....	....	....	....	....	....
Haileybury	2	....	2	25	1	26	10	....	10	28	5	33
Kenora	2	....	2	2	....	2	1	....	1	20	....	20
North Bay	16	....	16	20	....	20	10	....	10	12	5	17
Parry Sound	1	....	1	6	....	6	2	....	2	1	....	1
Port Arthur	2	1	3	17	1	18	9	....	9	27	2	29
Sault Ste. Marie	....	....	....	7	....	7	2	....	2	23	2	25
Sudbury	2	....	2	15	....	15	3	....	3	11	1	12
Totals	102	4	106	399	11	410	152	13	165	1,384	58	1,442

* City Gaols

No. 5 (Concluded)

Reformatories, Penitentiaries or Elsewhere.

CITY and COUNTY GAOLS	2 years and over to Penitentiaries			Sentenced to death and executed			Sentenced to death but sentence commuted			Totals		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Barrie	4	....	4	....	....	....	....	....	....	294	4	298
Belleville	4	....	4	....	....	....	....	....	....	381	11	392
Brampton	2	....	2	....	....	....	....	....	....	93	6	99
Brantford	9	....	9	....	....	....	....	....	....	358	15	373
Brockville	7	....	7	1	....	1	....	....	....	314	12	326
Cayuga	8	....	8	....	....	....	....	....	....	101	10	111
Chatham	10	....	10	....	....	....	....	....	....	534	19	553
Cobourg	6	....	6	....	....	....	....	....	....	249	2	251
Cornwall	11	....	11	....	....	....	....	....	....	363	14	377
Goderich	3	....	3	....	....	....	....	....	....	54	7	61
Guelph	11	....	11	....	....	....	....	....	....	347	13	360
Hamilton*	76	....	76	....	....	....	....	....	....	1,496	102	1,598
Kingston	7	....	7	....	....	....	....	....	....	329	2	331
Kitchener	6	....	6	....	....	....	....	....	....	424	15	439
Lindsay	2	....	2	....	....	....	....	....	....	87	3	90
London	27	....	27	....	....	....	....	....	....	953	63	1,016
L'Orignal	1	....	1	....	....	....	....	....	....	123	9	132
Milton	2	....	2	....	....	....	....	....	....	89	3	92
Napanee	2	....	2	....	....	....	....	....	....	75	2	77
Orangeville	4	....	4	....	....	....	....	....	....	25	1	26
Ottawa	31	....	31	....	....	....	....	....	....	2,075	49	2 124
Owen Sound	6	....	6	....	....	....	....	....	....	174	3	177
Pembroke	10	....	10	....	....	....	....	....	....	242	1	243
Perth	7	....	7	....	....	....	....	....	....	187	3	190
Peterboro	3	....	3	....	....	....	....	....	....	322	12	334
Picton	...	....	...	....	....	....	....	....	....	76	3	79
St. Catharines	16	....	16	....	....	....	....	....	....	289	2	291
St. Thomas	8	....	8	....	....	....	....	....	....	292	3	295
Sarnia	6	....	6	....	....	....	....	....	....	251	9	260
Simcoe	10	....	10	....	....	....	....	....	....	260	9	269
Stratford	7	1	8	....	....	....	....	....	....	147	2	149
Toronto*	106	2	108	1	....	1	....	....	....	8,136	473	8,609
Walkerton	7	....	7	....	....	....	....	....	....	135	5	140
Welland	15	....	15	....	....	....	....	....	....	715	10	725
Whitby	10	....	10	....	....	....	....	....	....	316	6	322
Windsor	18	....	18	....	....	....	....	....	....	1,002	19	1,021
Woodstock	11	....	11	....	....	....	....	....	....	203	6	209
DISTRICT GAOLS												
Bracebridge	1	....	1	....	....	....	....	....	....	75	3	78
Fort Frances	3	....	3	....	....	....	....	....	....	139	7	146
Gore Bay	2	....	2	....	....	....	....	....	....	43	6	49
Haileybury	18	....	18	....	....	....	....	....	....	1,088	33	1,121
Kenora	1	....	1	....	....	....	....	....	....	313	14	327
North Bay	9	....	9	....	....	....	....	....	....	603	21	624
Parry Sound	6	....	6	....	....	....	....	....	....	161	6	167
Port Arthur	9	....	9	....	....	....	....	....	....	1,118	72	1,190
Sault Ste. Marie	11	....	11	....	....	....	....	....	....	312	10	322
Sudbury	17	....	17	1	....	1	....	....	....	1,417	46	1,463
Totals	550	3	553	3	....	3	....	....	....	26.780	1,146	27,926

TABLE

Cell Accommodation: Days Stay: Greatest, Least and Average Number of

CITY and COUNTY GAOLS	Male Cell accomodation	Female Cell accomodation	Greatest No. of prisoners during year	Greatest No. of Male prisoners during year	Greatest No. of Female prisoners during year	Least No. of prisoners during year	Least No, of Male prisoners during year	Least No. of Female prisoners during year	Average daily gaol population.
Barrie	24	3	48	48	3	11	11	.....	27.9
Belleville	18	6	57	56	1	14	14	......	35.4
Brampton	24	8	17	16	3	1	1	......	7.9
Brantford	24	8	45	42	3	17	17	......	29.1
Brockville	28	4	32	29	3	4	4	1	18.5
Cayuga	9	4	21	16	5	3	2	1	7.5
Chatham	35	6	70	70	3	16	15	......	38.3
Cobourg	15	6	34	34	4	5	5	......	19.3
Cornwall	18	4	49	47	3	12	12	1	28.8
Goderich	9	3	11	11	3	2	2	......	6.1
Guelph	24	6	48	48	3	17	17	......	31.0
Hamilton*	84	13	133	126	9	88	81	1	108.5
Kingston	37	7	53	52	2	10	10	......	28.2
Kitchener	38	6	49	48	4	13	12	......	32.9
Lindsay	30	6	15	15	1	3	3	......	8.9
London	62	9	91	86	10	42	40	......	64 0
L'Original	18	6	26	26	3	3	3	......	12.9
Milton	17	6	21	21	1	1	1	......	8.1
Napanee	18	6	16	16	1	1	1	......	5.5
Orangeville	18	5	9	9	1	....	....	......	3.1
Ottawa	96	16	146	140	6	58	58	... ..	108.6
Owen Sound	30	6	35	35	3	8	8	......	17.9
Pembroke	24	8	30	30	1	7	7	......	18.0
Perth	18	6	33	32	2	2	2	......	11.0
Peterboro	18	6	36	35	3	11	11	......	21.6
Picton	18	6	17	16	1	.....	......	......	6.1
St. Catharines	35	8	43	43	1	12	12	1	25.4
St. Thomas	13	4	27	27	1	8	8	......	16.6
Sarnia	33	6	35	35	4	10	10	......	20.9
Simcoe	17	5	25	24	2	2	2	......	11.5
Stratford	23	4	24	24	2	4	4	......	12.6
Toronto*	237	39	330	312	28	138	124	5	252.5
Walkerton	28	4	25	24	1	4	4	......	12.9
Welland	44	9	74	73	5	19	19	......	44.0
Whitby	17	6	37	35	4	18	18	......	26.3
Windsor	81	30	92	87	8	45	43	......	68.1
Woodstock	26	5	25	25	2	4	4	1	13.3
DISTRICT GAOLS									
Bracebridge	8	2	12	12	1	1	1	......	4.9
Port Frances	20	4	28	28	2	3	3	......	11.6
Gore Bay	9	2	11	8	3			......	3.3
Haileybury	29	3	133	129	8	45	43	......	85 6
Kenora	22	6	49	47	2	19	19	......	36.5
North Bay	50	9	80	75	5	18	17	1	41.9
Parry Sound	20	2	20	19	2	5	5	......	12.7
Port Arthur	64	9	124	122	16	63	60	1	88.6
Sault Ste. Marie	20	3	51	48	3	20	20		31.3
Sudbury	59	10	158	149	9	52	52	......	95.9
Totals									

*City Gaols

No. 6.

Prisoners for the Year Ending March 31st, 1939.

CITY and COUNTY GAOLS	Number committed during year	Number paid for by province	Number paid for by municipality	Number of days stay of government prisoners	Number of days stay of municipality prisoners	Total number of days stay of all prisoners
Barrie	395	212	183	6,731	3,441	10,172
Belleville	573	173	400	7,278	5,643	12,921
Brampton	172	86	86	1,890	983	2,873
Brantford	513	119	394	3,536	7,086	10,622
Brockville	361	91	270	2,254	4,515	6,769
Cayuga	122	37	85	1,413	1,333	2,746
Chatham	644	221	423	3,945	10,036	13,981
Cobourg	335	82	253	3,577	3,485	7,062
Cornwall	426	171	255	4,897	5,609	10,506
Goderich	102	61	41	1,406	812	2,218
Guelph	475	90	385	2,929	8,369	11,298
Hamilton*	1,944	657	1,287	13,778	25,841	39,619
Kingston	398	168	230	4,901	5,402	10,303
Kitchener	571	129	442	3.897	8,122	12,019
Lindsay	107	57	50	2,016	1,248	3,264
London	1,332	245	1,087	6,758	16,619	23,377
L'Orignal	174	102	72	3,666	1,035	4,701
Milton	147	51	96	1,924	1,032	2,956
Napanee	106	43	63	1,556	457	2,013
Orangeville	46	10	36	780	342	1,122
Ottawa	2,582	548	2,034	15,830	23,809	39,639
Owen Sound	227	122	105	3,956	2,578	6,534
Pembroke	283	104	179	3,641	2,920	6,561
Perth	218	65	153	1,756	2,241	3,997
Peterboro	360	56	304	2,098	5,795	7,893
Picton	96	74	22	1,901	332	2,233
St. Catharines	332	81	251	2,894	6,390	9,284
St. Thomas	337	61	276	1,587	4,489	6,076
Sarnia	306	99	207	3,983	3,660	7,643
Simcoe	381	60	321	1,003	3,210	4,213
Stratford	189	53	136	2,261	2,326	4,587
Toronto*	11,197	2,095	9,102	20,204	71,974	92,178
Walkerton	176	65	111	2,481	2,215	4,696
Welland	871	214	657	5,177	10,866	16,043
Whitby	403	146	257	4,284	5,308	9,592
Windsor	1,237	249	988	6,519	18,350	24,869
Woodstock	288	84	204	2,549	2,313	4,862
DISTRICT GAOLS						
Bracebridge	94	94	....	1,791	....	1,791
Fort Frances	181	181	....	4,222	....	4,222
Gore Bay	56	56	....	1,196	....	1,196
Haileybury	1,216	1,216	....	31,244	....	31,244
Kenora	400	333	67	12,957	372	13,329
North Bay	741	740	1	15,312	4	15,316
Parry Sound	212	212	....	4,631	....	4,631
Port Arthur	1,310	218	1,092	7,620	24,729	32,349
Sault Ste. Marie	408	408	....	11,416	....	11,416
Sudbury	1,870	1,870	....	35,005	....	35,005
Totals	34,914	12,309	22,605	286,650	305,291	591,941

* City Gaols.

TABLE No. 7.

Maintenance and Average Cost of Each Prisoner and Total Cost for Year in City, County and District Gaols.

CITY and COUNTY GAOLS	Cost of fuel, food and clothing	Cost of officer's salaries	Cost of repairs	Total expenditure for maintenance for the year	Average Cost of each prisoner per day	Average cost per day for fuel food and clothing	Daily per capita dietary cost
Barrie..........	$ 4,954.82	$ 4,217.50	$ 1,670.12	$ 10,842.44	$ 1.07	$ .4871	$.1683
Belleville.......	4,206.23	3,420.00	69.08	7,695.31	.60	.3243	.1275
Brampton.......	1,613.60	2,362.00	464.55	4,440.15	1.55	.5616	.1771
Brantford.......	2,880.40	7,211.00	300.00	10,391.40	.98	.2712	.1437
Brockville.......	2,033.00	3,279.77	669.02	5,981.79	.88	.3003	.1476
Cayuga.........	825.15	2,282.00	40.00	3,147.15	1.15	.3005	.1585
Chatham.......	3,902.31	5,577.50	1,946.98	11,426.79	.82	.2790	.1238
Cobourg........	3,260.22	2,646.50	477.61	6,384.33	.90	.4617	.1342
Cornwall........	3,851.65	6,654.38	3,325.31	13,831.34	1.32	.3666	.1643
Goderich........	1,146.43	2,842.63	1,078.47	5,067.53	2.28	.5169	.1184
Guelph.........	3,313.84	4,520.00	78.50	7,912.34	.70	.2933	.1368
Hamilton*......	10,482.00	19,578.00	1,433.00	31,493.00	.79	.2646	.1659
Kingston........	1,688.01	4,397.50	477.57	6,563.08	.64	.1638	.1354
Kitchener.......	4,032.26	4,944.00	17.54	8,993.80	.75	.3355	.1395
Lindsay.........	1,212.73	3,068.50	357.80	4,639.03	1.42	.3715	.1365
London.........	5,179.60	13,740.10	250.76	19,170.46	.82	.2216	.1397
L'Orignal.......	1,775.80	2,407.00	313.56	4,496.36	.96	.3777	.1570
Milton..........	990.51	2,240.63	136.28	3,367.42	1.14	.3350	.1546
Napanee........	923.71	2,457.50	16.84	3,398.05	1.69	.4589	.1381
Orangeville......	1,338.14	3,265.29	50.35	4,653.78	4.15	1.1926	.2009
Ottawa.........	16,956.70	17,724.50	1,413.60	36,094.80	.91	.4278	.1514
Owen Sound.....	2,139.24	3,676.00	570.93	6,386.17	.98	.3274	.1131
Pembroke.......	1,553.20	3,240.00	....	4,793.20	.73	.2367	.1561
Perth...........	3,401.57	2,899.53	....	6,301.10	1.58	.8510	.1773
Peterboro.......	2,423.40	3,021.00	1,612.18	7,056.58	.89	.3070	.1378
Picton..........	819.49	1,446.25	268.29	2,534.03	1.13	.3670	.1578
St. Catharines...	3,633.53	3,730.00	93.52	7,457.05	.80	.3914	.1688
St. Thomas.....	2,372.66	4,373.64	30.43	6.776.73	1.12	.3905	.1619
Sarnia..........	2,481.45	4,436.00	1,085.93	8,003.38	1.05	.3247	.1567
Simcoe.........	1,871.70	3,380.50	1,807.35	7,059.55	1.68	.4443	.1519
Stratford........	1,845.38	3,390.49	254.89	5,490.76	1.20	.4023	.1229
Toronto*.......	21,786.15	62,076.35	1,756.31	85,618.81	.93	.2363	.1216
Walkerton......	981.94	2,503.60	50.00	3,535.54	.75	.2091	.1319
Welland........	4,242.14	5,755.50	89.00	10,086.64	.63	.2644	.1678
Whitby.........	4,361.24	4,246.50	1,451.62	10,059.36	1.05	.4547	.1422
Windsor........	8,656.29	14,612.42	1 264.80	24,533.51	.99	.3480	.1378
Woodstock......	2,200.53	3,418.00	2,238.40	7,856.93	1.62	.4526	.1044
DISTRICT GAOLS							
Bracebridge.....	407.19	1,936.00	11.04	2,354.23	1.31	.2274	.1457
Fort Frances....	1,047.55	4,368.75	546.51	5,962.81	1.41	.2481	.1700
Gore Bay.......	793.56	1,980.00	1,012.93	3,786.49	3.17	.6635	.1693
Haileybury......	8,335.89	11,619.75	613.71	20,569.35	.66	.2667	.1440
Kenora.........	5,125.16	7,971.83	116.34	13,213.33	.99	.3845	.1526
North Bay......	5,358.72	11,035.05	218.30	16,612.07	1.08	.3499	.1626
Parry Sound.....	1,363.11	4,175.00	25.00	5,563.11	1.20	.2943	.1747
Port Arthur.....	12,992.98	15,300.00	....	28,292.98	.87	.4017	.1894
Sault Ste. Marie.	5,032.99	6,325.00	....	11,357.99	.99	.4409	.1466
Sudbury........	14,107.87	12,774.00	150.00	27,031.87	.77	.4030	.1599
Totals......	$195,902.04	$ 322,527.46	$ 29,854.42	$ 548,283.92	.93	.3309	.1477

Annual Report

UPON THE

Industrial Schools and Training Schools

OF THE

PROVINCE OF ONTARIO

BEING FOR THE YEAR ENDING 31st MARCH

1939

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 54, 1939

ONTARIO

TORONTO
Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty
1939

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To The Honourable Albert Matthews,
Lieutenant-Governor of the Province of Ontario.

May It Please Your Honour:

The undersigned has the honour to present the Annual Report upon the Industrial Schools and Training Schools of the Province of Ontario for the year ending 31st March, 1939.

Respectfully submitted,

H. C. Nixon,
Minister.

HONOURABLE HARRY CORWIN NIXON,
Provincial Secretary of Ontario.

Sir,—

The attached report of the Advisory Board for Training Schools and Industrial Schools, and the extensive, detailed reports of the superintendents of these institutions, give to some extent at least a view of the intensely interesting work being done to reclaim for our province the wealth of ability, energy and possibilities for good in children who have got off to a bad start. This bad start is in some cases the result of defective mental equipment, but is mostly the result of careless and neglectful parental supervision and direction.

For those with defective mental equipment there must be education especially adapted to their abilities, and eventually some of these can permanently fill a useful place in society.

Kindly, firm discipline and care, the regular programme of study as arranged by the Department of Education, and the opportunity to grow mentally, morally and physically are generally sufficient for the other large group.

A Training or Industrial School requires necessary buildings and equipment and most important of all, a staff properly qualified, but care must be taken that these children will not be given too much and thus lose the incentive to work and to learn and to achieve, and lose the thrill of excitement that comes only by self effort. It must be remembered that these children in a short time will return to their own homes, or go to other modest homes, and the final result may be disastrous if the school life has been one of luxury and pampering. We believe the following to be necessities in these schools and in this order of importance:—proper physical care; kind, firm discipline with religious and moral teaching; academic study according to the mental ability of the pupil, teaching to work mentally and physically, and vocational training. We have carefully observed the work of all of these schools and believe they are well staffed. The equipment for teaching and for work is reasonable. The buildings at Galt, Bowmanville and Alfred are excellent. The buildings of the other two should as soon as possible be replaced on better sites with modern, fire-proof structures.

There was a substantial increase in the number of children sent to the five schools for the year under review. It should not be immediately assumed that this was the result of increased juvenile delinquency. We have reason to believe that the increased enrollment was in part due to increased confidence in the rehabilitating efforts of the schools. This has been evidenced by the larger percentage of younger pupils. This is very important. Too often in the past, children have repeated several times before a court (sometimes for serious offences) each time being remanded to the parents, a social service organization, or a children's aid society, and finally at probably fifteen years of age have been committed to one of the schools. The intention of the court, of course, was good. The result was bad for too many. This boy or girl of fifteen years who has repeated offences is a serious problem for the school as far as rehabilitation is concerned, and is a bad influence on the younger pupils. It appears plain that unless it is clear to the court that the child will be given good care, discipline and supervision, that certainly after at least the second offence, a training or industrial school is the proper place for a short time, after which he or she can be properly placed.

It is appropriate and deserving to commend the work of Children's Aid Societies and many social service organizations engaged in children's work. The amount of preventive work they do is enormous and invaluable. The fund of information from them in case histories is of the greatest importance to the schools. They give us assistance in our school placements and after supervision, thus saving duplication of efforts and costs.

It is also appropriate that tribute should be paid to the Chairman and members of the Advisory Board. You will note that during the year the Board held 52 meetings and reviewed 3,752 cases. They gave their time, their abilities, good judgment and advice without any remuneration whatever and without any cost to the Public Treasury.

I wish to thank the officials of the Department of Health, Education, Public Welfare, Labour and Agriculture for co-operation and assistance given to these schools during the year, to commend members of the staffs for their good work, individually and collectively, and to express my appreciation of your intense interest and direction.

It has been a very interesting and clearly successful year. The work within the schools with the pupils was intensified, the placements outside increased, and supervision improved.

No new buildings were erected, but at the Galt School landscaping of the entrance and grounds was started by using prison labour from the Ontario Reformatory, Guelph, and is being continued. Similar improvements to the grounds and farm at Bowmanville were made by the boys there, particularly during the summer months. The boys of the Alfred school continued improvement of the Alfred farm, and the necessary underdraining. Plans are under way by the authorities of St. Mary's School for a new school on their property on Dufferin Street out in the open country.

As stated in the report of the Advisory Board, a new Act,—the Training Schools Act was introduced into the Legislature to replace the former Training Schools Act and the Industrial Schools Act. Shortly after the conclusion of the fiscal year it was passed by the Legislature, received Royal Assent so that, effective June 26th, 1939, the Industrial Schools become legally Training Schools. They have already been that in the results of their work on their pupils, and it is expected that working under the advantages of the new Act they will achieve still greater success.

C. F. Neelands,
Deputy Provincial Secretary.

REPORT OF ADVISORY BOARD FOR INDUSTRIAL AND TRAINING SCHOOLS

We have the honour to present the eighth annual report of the Advisory Board for Industrial and Training Schools, covering the period from April 1st, 1938 to March 31st, 1939.

During the year we have held 52 meetings and reviewed 3,752 cases. The record of each boy and girl in the Schools, or on parole under the supervision of the Schools, is reviewed every four months and more frequently when special attention is required.

The Industrial and Training Schools of the Province are not penal institutions and should be looked upon as educational in their function, and this principle is observed in deciding the course of training, treatment and length of stay of each pupil in the schools.

Thorough physical and mental examinations are given to all pupils entering the schools. The physical examination includes tuberculin tests, Schick test for diphtheria, and if positive, immunization, Dick test for scarlet fever and vaccination against smallpox. Any pupil whose tuberculin test is positive is subjected to an x-ray examination of the chest. The mental examinations prove to be a guide in determining the specific requirements in the training and education of the individual pupil.

The academic and vocational work carried on in the schools is subject to regular inspections of the Department of Education. The reports presented by the inspectors show that the school work is conducted strictly according to the regulations of the Department of Education, and the work done proven to be fully up to the standards prevailing in the Public and Separate Schools of the Province.

During the year your Board made a special survey of pupils who have been in the schools for two years or more. This was in addition to the usual reviews, and resulted in a number of extra placements, and also in the re-examination of health and mentality of pupils whose lack of progress indicated that such examinations were advisable.

During the year 17% of the new pupils received in the schools were mental defectives; and at the close of the year a total of 18% of all pupils in residence were mental defectives. The Board is of the opinion that there is need for an institution for delinquent defectives who become serious problems in the Industrial and Training Schools. Some of these difficult pupils cannot be admitted for training at the Ontario Hospital Training School, Orillia, for two reasons,—first because the Institution is already well filled, and secondly because the cases referred to might be described as "Nuisance" cases which require a different sort of handling than either in the Industrial and Training Schools, or the Ontario Hospital Training School, Orillia.

The policy of the Board, as previously reported, is to return normal pupils to their own homes as early as seems desirable, and in other cases to reduce as far as possible the period of institutional residence by the placement of younger children in foster homes and by procuring employment for the older pupils as soon as their general improvement appears to warrant such action. Boarding home placement after a short period of correction has tended to shorten the stay of the children in the schools, and the problem of rehabilitation has been lightened. The schools have full-time Placement Officers who are responsible for securing boarding and other homes, and for providing supervision in these homes. Reports of these officers must be approved by the School Superintendent and submitted to your Board to ascertain that such placements continue to be satisfactory.

Seven percent. of those at present in the schools are children under the age of twelve, and our efforts to return them to some form of normal family life as soon as it is feasible will be continued.

Your Board has under consideration the problem of boys and girls, who while wards of the schools have been sentenced to senior institutions for criminal offences. When boys and girls under twenty-one years of age leave senior institutions, the Schools Officers assist in supervision and in securing employment for these wards, but do not approve of the policy of returning them to the Training Schools.

The Board has repeatedly recommended that serious consideration be given to the possibilities of extending the Juvenile Court System. This need was referred to at some length in our report of last year, but it would appear that up to date no new Juvenile Courts have been established, and until such additions take place it is somewhat difficult to secure co-operation from those voluntary social agencies who would work with the Courts if established. There have been cases of boys and girls who were finally committed at fourteen and fifteen years of age, whose delinquency record would have justified them being sent to the Industrial and Training Schools earlier than their eventual commitment. We are pleased to report there have been fewer cases of delayed commitments during the past year than for some time.

Your Board has continuously advocated and carried out the policy of removing older delinquents from our juvenile institutions. Of the present population over the age of eighteen, all are pupils whose problems are difficult of solution because of social and mental disease and other defects, which make it inadvisable to replace them in society. The Industrial and Training Schools are not equipped to deal adequately with many of these problems. These older boys and girls are a disturbing influence upon the younger pupils, and in escape and conduct problems the initiative can frequently be traced to one of their older group.

The rehabilitation of Indian boys and girls continue to be a problem. As it is considered that Indian juvenile delinquents should receive training in Indian schools, your Board again recommends that suitable arrangements be made between the Provincial and Dominion Governments to permit all Indian delinquents to be transferred from the Provincial to the Dominion authority.

On June 8th, 1938, the members of this Board had the pleasure of attending the opening ceremonies for the new hospital unit of the Ontario Training School for Boys, Bowmanville.

For some time your Board has been urging the consolidation of the Industrial Schools Act and the Training Schools Act, and when appearing before the Royal Commission to Investigate the Penal System of Canada, pointed out the desirability of such consolidation. We are now able to report that we had the opportunity during the year of examining material and submitting suggestions for the new Training Schools Act, which at the date of this report had already been introduced into the Legislature.

C. L. Burton, *Chairman,*
Adelaide M. Plumptre,
W. T. Kernahan,
George W. Hambly,
W. R. Cockburn,
E. P. Lewis, M.B.

REPORT OF THE ONTARIO TRAINING SCHOOL FOR GIRLS, GALT, ONTARIO

April 1, 1938 to March 31, 1939.

So many inquiries as to the nature of our School and its programme were received in the past year, that in presenting the annual report, I propose to deal with the organization and work of our institution so that these inquiries may be answered.

The School has accommodation for ninety-four girls. On April 1st, 1938, there were sixty girls in residence. During the year we had sixty-two admissions, and on March 31st, 1939, eighty-one girls remained, eighteen of whom were in residence on April 1st, 1938. The age of the girls admitted during the year ranged from nine to sixteen years, forty-six of whom were committed to the School through the Court, as against sixteen admissions on approval of the Advisory Board.

The purpose of our School is to train the girls in a happy, wholesome way of life, and our programme is designed to serve this end. To plan such a programme, a full knowledge of each girl's mental and physical capacity, her talents, aptitudes and interests is essential. In other words, a study of the girl as an individual is necessary so that a plan can be made whereby she receives the greatest opportunity for the redirection of her abilities along constructive lines. Such a programme requires objectivity on the part of staff members. "Prejudice and retaliation" can have no place in it.

A study of our group indicated a considerable variation in the type and degree of problem. Among the admissions were two definite types of girls. One type represented those for whom every possible effort toward their rehabilitation in the community had been made before consideration was given to their admission to our School. These girls were likely to require a long period of supervision and training in the School, while the other type included girls sent to the School when they were younger and more amenable, with their bad habits not so deeply rooted. This group responded much more quickly to the School programme and supervision, and therefore required a shorter period in the School.

It was apparent that some method should be devised to ascertain to which group each admission belonged, so in accordance with the best accepted practice, one of the four cottages was designated as reception cottage. Placed in charge of this cottage as Housemother was a thoroughly trained Psychologist. Each new admission remained in this cottage a sufficient length of time to have a thorough personality study made, in order that we could prognosticate with a fair degree of accuracy the probable length of time she should remain in the School, and the type of treatment and supervision she should require both inside and outside the School.

From the accompanying chart it will be noted that a girl sometimes responds so well that after only a short period in reception cottage, she may be returned to the community. On the other hand, it may be felt a somewhat longer period in the School is needed, but that the girl will respond satisfactorily to the greater freedom of placement cottage where she has opportunity to shop, attend church, and the show alone. A third possibility is when a girl may require an extended period in the School before placement can be considered, in which case a transfer to one of our two other cottages is made.

MENTAL HEALTH CLINIC.

The services of the Mental Health Clinic of the Ontario Hospital, Hamilton, were at our disposal two days a month, and their advice and counsel have been of great value to us in arriving at the above classification. All those admitted to the School who had not had a recent psychological or psychiatric examination before entering the School, were referred, and continued mental therapy was given our more difficult problem cases.

A real improvement in general espris de corps and co-operation was experienced, much constructive leadership was given by the girls as they learned the significance of individual versus mass treatment, and it was a great satisfaction to members of staff to have the girls voluntarily coming in increasing numbers to have their problems analyzed and to receive counsel thereupon. The results have certainly shown a greater effort to develop new and healthier habits of conduct.

I wish to draw attention to the fact that ten per cent of our admissions belonged to the moron group in intelligence. This type of girl we find extremely difficult, as she does not adjust to a programme designed to suit normal and superior girls. Consequently, we find it difficult to maintain the tempo desired with such a leavening influence. Seven girls were transferred to the Ontario Hospital, at Orillia and Cobourg during the year.

It is, however, interesting to note, that even when including these, the average intelligence of our admissions was 86.

ACADEMIC AND VOCATIONAL.

It should be noted that our girls are divided into two groups for training. The group designated as "Specials" is comprised of those girls who are sixteen years of age or over, and who have reached their academic limit and are thereby assigned to vocational groups only, while the second group comprises those girls who are under sixteen years of age, and who attend the regular school classes. This latter group takes only those vocational classes which are prescribed in the Course of Study.

The old axiom "Satan finds mischief for idle hands to do" is truer today than ever before, so we endeavour to fill each moment of the day with healthful, interesting work and recreation.

Academic.

No. of girls in High School Room.

Grade VIII	9
" IX	4
" X	5

No. of girls in Elementary Room.

Grade VII	30
" VI	14
" V	6
Auxiliary	10

Vocational.

No. of girls in Power Operating	22
" " Beauty Parlor	15
" " Laundry	22
" " Dental Office	3
" " Domestic Training	59
" " Sewing and Academic	48
" " Sewing and Vocational	44
" " Household Science	68

Power Operating.

A six months' course in Power Operating was instituted last November, and has proven popular with the girls. It is hoped that many of the girls, on completion of their course will find positions. Following is production from the sewing classes for the year:

Aprons	8
Housecoats	65
Pyjamas, pairs	100
Nightgowns	20
Cotton Slips	9
Confirmation Dresses	2
Capes — Beauty Parlor	6
Costume capes	2
Curtains, pairs	38
Tie Backs	16
Common room cushions	32
Gymnasium markers	36
Pillow cases, dozen	11
Tea towels, dozen	3½
Sheets, dozen	2
Bath towels, dozen	2
Hand towels, dozen	6½
Serviettes, dozen	2½
Place mats, dozen	½

Alterations in the spring and autumn coats and dresses. The mending of linens from all cottages.

Laundry.

Our Laundry course was begun in August, 1938, and since that time approximately 12,000 pieces of laundry have been done. The work is carried on with household equipment, and in the six months assigned to laundry training, the girls become quite profficient in the different skills and the use of the electrical equipment.

Domestic Training.

Girls who are over sixteen or who have reached their academic limit, find the domestic training course of great interest. It assures a training that is valuable to them throughout life in their own home; or if they require employment there is always a demand for their services.

This course covers a five month period. One month is spent as dining room girl. Here the girl learns the care of the dining room and the silver, the setting of tables, table service, the planning and serving of staff food. A month in the pantry covers the operation and care of the refrigerator, the use of left-over food, and how to store and order food. A transfer is then made to the kitchen where three months are spent learning its organization and care, how to do plain and fancy cooking, and the preparation of balanced diets.

Dental Assistant.

A well equipped dental office provides an opportunity for a limited number of girls to get training and experience as a dental assistant. It is the responsibility of the Dental trainee to keep the office clean, to sterilize the instruments, to be present and assist the dentist the morning he is at the School, to keep the dental charts, and make appointments.

Beauty Parlor.

One afternoon each week, a qualified operator from Galt gives instruction in hair cutting, shampooing, finger waving and manicuring. The course serves the School in two ways. It provides training for the girls who are interested in choosing this as a vocation, and it stimulates interest in personal appearance. Two girls have found employment in the field and are proving very satisfactory to their employers.

Household Science.

Formal instruction is given in the Household Science classroom. This instruction is co-ordinated with the work the girls do in the kitchen. Sufficient preserving and pickling was done last autumn to give the girls experience and knowledge in the fundamentals of canning and pickling.

Household Management.

The general care and upkeep of the cottages and school furnishes an ideal laboratory for training in Household Managament. Each girl receives instruction in this phase of homemaking. Many of the girls on entry have no knowledge of how to do the simplest household tasks. Each girl is responsible for the care of her own room, the other household work including staff rooms is rotated among the girls in the cottage, the staff rooms being assigned to the girls who have progressed most satisfactorily in their housework.

Field and Garden.

Ten more acres were brought under cultivation last spring, making a garden of fifteen acres. The soil is very light, and needs a great deal of attention and cultivation before it will become good garden land. Following is a report on our garden returns:

Potatoes	277	bus.
Rhubarb	142	lbs.
Parsnips	462	lbs.
Beets	1,636	lbs.
Spinach	100	lbs.
Swiss Chard	300	lbs.
Carrots	220	lbs.
Cabbage	217	lbs.
Peas	150	lbs.
Lettuce	135	lbs.

Radish	65 lbs.
Beans	195 lbs.
Onions	474 lbs.
Cucumbers	335 lbs.
Vegetable Marrow	66 lbs.
Corn	496 lbs.
Pumpkins	2,005 lbs.
Tomatoes	441 lbs.
Squash	58 lbs.
Melons	149 lbs.
Turnips	780 lbs.

Poultry.

The first of April, 1938, we made a fresh start with three hundred, day old Plymouth Rock chicks. We were successful in raising them, and two of the girls assigned to the work showed real improvement in behaviour and became increasingly more stable because of their interest in this job.

There were a large number of cockerels in the flock. These provided Sunday dinners twice a month for staff and girls until after the new year. 764 dozen eggs were produced.

Religious Instruction.

Attendance at Sunday morning service in one of the churches in Galt is required of all girls. During the year seven girls took out church membership. In each cottage Sunday evening is devoted to an informal sing song or vesper service, and each week a period is set aside for formal bible study.

Recreation.

Holidays at Christmas and midsummer are a means of testing the effectiveness of treatment. Each girl who has earned a holiday by definite and prolonged improvement in her behaviour, may be allowed to spend it in her own home, or if this is not thought wise, in a foster home secured by the School.

Four girls were sent to one of the regular C.G.I.T. summer camps. The progress of each one of these girls had merited special recognition and the camp experience was most beneficial.

In July and August when weather permitted, a weekly picnic was held. On these days the girls and staff proceeded en masse to a nearby lake to spend a happy day swimming and playing games in the out of doors. In the spring and fall, cross country hikes and corn roasts were very popular, while in the winter the weekly picture show at Galt, or the opportunity to skate at the arena was the goal to be earned.

Special Treats.

Many local organizations were thoughtful in extending invitations to our girls to attend various public entertainments. Among those attended were—the Kiwanis Circus, the Y. M. C. A. Circus, the Young People's entertainments of various churches, the Hespeler Hobby Show, etc.

Library.

Several summer days were devoted to cataloguing and placing in circulation books received on the closing of a public library. 114 new books were added to the library. We are particularly fortunate in having as one of our Housemothers a librarian and author. Through her efforts the circulation of books has greatly increased, and she has been successful in stimulating more and better reading amongst the girls.

Painting.

The Mae Martin Cottage which had been closed since December, 1937, was opened as Placement Cottage at the New Year. Anticipating its early opening, its redecoration was undertaken in July and August. The girls were responsible for this work, and twenty-four girls' rooms and the Common Room were painted, the result was commendable.

Hobbies.

Much thought on the part of the staff was given to planning leisure time activities. A survey of the special skills of staff members made possible supervision and instruction in each of the following hobbies: knitting, weaving, handwork, woodwork, metal craft, sculpturing, nature study, dancing and art. Each girl was allowed to participate in any three, and three evenings a week were spent by the girls pursuing their hobby choices. The beneficial results were immediately apparent, for in the pursuit of a wholesome interest their emotional strain was relieved, habits of concentration were learned, and in having an opportunity to do creative work self confidence was gained. Furthermore, it is believed the development of these interests will help the girls to solve some of their leisure time problems on their return to the community. This was proved in the case of L. who went to a domestic position where there were two small children. In looking over the home L. saw a small room in the basement, and wondered if instead of having rough and tumble play hour after hour, this room could not be used for a sculpturing class, when she could impart her knowledge of the art not only to the children in the home, but to their companions in the neighbourhood. The employer was happy to co-operate in the plan.

The Orchestra is another hobby which has meant much to the girls who have a musical interest, and the appreciation of the staff and girls go to Messrs. Dark and Frank of Kitchener, for their interest and devotion in coming so regularly throughout the year.

Landscaping.

A tremendous improvement in the appearance of the grounds parallel to the Hespeler Highway is increasingly apparent. From May to November sixteen or more men came daily from the Ontario Reformatory to carry on the work of beautification. This work included the levelling of the grounds and building of a thirty foot boulevard on each side of the road, drainage and the planting of grass and shrubs. A red brick gateway built by a local contractor further improved the entrance to the grounds.

Report of Medical Officer.

During the year the health of girls at the Training School has been good.

All new admissions have been given a complete physical examination, and any pathological conditions found were given treatment. All cases are re-examined if in the School one year. Considerable Public Health work has been done during the year. All admissions have had intra cutaneous Tubercular test. Any positive reactions have had chest x-rays at Freeport Sanitorium. Any cases who have not had Toxoid previously are done after admission. Smears have been taken and Wasserman tests done on all girls.

A summary of work done follows:

Physical Examinations—	
Admissions	62
Readmissions	54
Reexaminations	118
Smears	162
Wassermans	170
Urinalysis	119
Tonsillectomy	20
Basal Metabolism Ratings	5
Appendectomy	1
Sub-mucous resection	1
X-rays—	
Galt General Hospital	2
Freeport Sanitorium	9
Burns—2nd degree	2
Syphilis	2
Chronic Endocarditis	2
Pyolitis	4
Pelvic Peritonitis	1
Keratitis	1
Eyes tested	35
Immunization against colds	4
Injection of varicose veins	1
Tuberculin tested	88
Immunization against Diphtheria	30
Sprains	4
Fractures—Scapula	1
Tonsillitis	15
Influenza	25
Impetigo	2

R. F. Slater, M.D.,
School Physician.

Dental Report

The majority of the girls resident at the School this year were in need of dental attention. Many had never received treatment and as a result had abscessed teeth and roots in their mouths. The first objective of the Dental Department was to remove these possible foci of infection and a marked improvement in the general health of many was noted. As the late Sir Wm. Hunter, M.D. (Edin.) F. R. C. P. (London) has said, "My Clinical experience has satisfied me that if oral sepsis (poisoning) could be successfully excluded, all the other channels by which medical sepsis gains entrance into the body might almost be ignored.

The following is classified report of the operations performed this year:

Patients at Clinic	648
Patients Treated	167
Examinations	457
Fillings	741
Extractions	186
Anaesthetics (General)	8
" (Local)	137
Pyorrhea Treatments	32
Prophylaxis	65
Other Treatments	27
X-rays	27
No. of Pictures	54
Porcelain Crowns	2
Dentures	5
Orthodoneutic	2
Inlays	1

Geo. A. Cowan, D.D.S.,
School Dentist.

Placement Report.

Eastern Ontario District.

Visits to Girls	1,092
Attendance at Clinics and Social Agencies	109
Attendance at Court	15
Homes Investigated	121
Girls under Supervision, March 31, 1939	77
Girls attending High School	9
Girls attending Public School	10
Girls in Domestic Positions	17
Waitress "	1
Factory Work "	4
Hospital "	3
Office Work "	1
Girls Unemployed	3
Whereabouts Unknown	2
In Institutions	27
O. H. Cobourg	3
O. H. Orillia	11
Mercer Reformatory	5
Industrial Refuge	8
Mileage	21,862

Jean D. Murray,
Placement Worker.

PLACEMENT REPORT.

Western Ontario District.

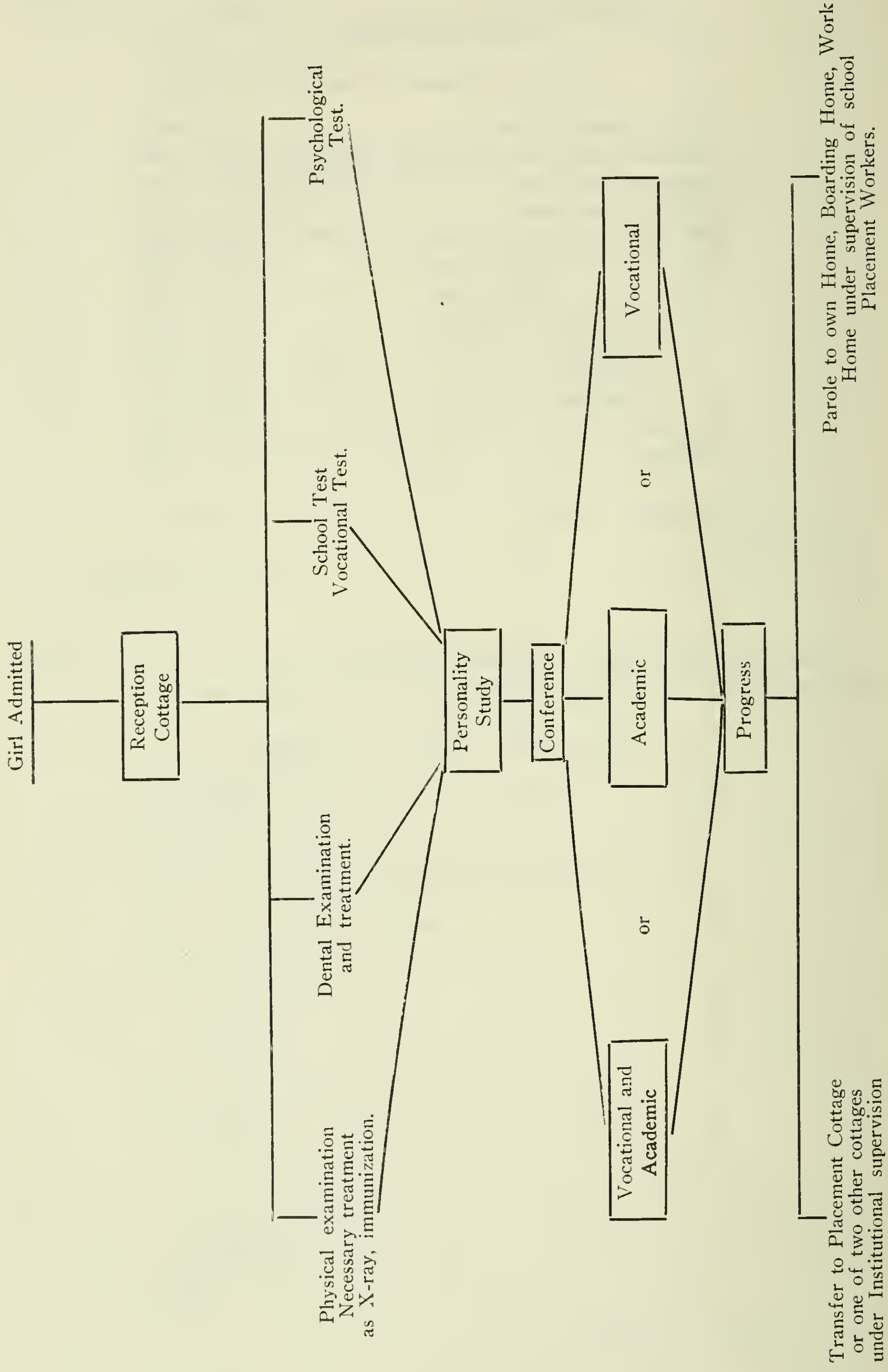
No. of Visits to Girls	681
Attendance at Clinics and Social Agencies	129
Attendance at Court	2
Homes Investigated	102
Girls under Supervision Mar. 31, 1939	55
Girls attending High School	4
" " Public School	8
Girls in Domestic Positions	29
" " Beauty Parlors	3
" " Factories	4
" " Business College	1
Unemployed	4
Unknown	2
Mileage	21,305

MADGE E. BREWSTER,
Placement Worker.

The opportunity given your Superintendent to make a tour of Training Schools in the Eastern United States was very much appreciated.

All of which is respectfully submitted.

NELL WARK,
Superintendent.


Girl Admitted
Reception Cottage
Psychological Test.
School Test
Vocational Test.
Dental Examination and treatment.
Physical examination
Necessary treatment
as X-ray, immunization.
Personality Study
Conference
Vocational
or
Academic
or
Vocational and Academic
Progress
Parole to own Home, Boarding Home, Work Home under supervision of school Placement Workers.
Transfer to Placement Cottage or one of two other cottages under Institutional supervision

REPORT OF THE ONTARIO TRAINING SCHOOL FOR BOYS, BOWMANVILLE

April 1, 1938 to March 31, 1939.

Through the last fiscal year the population of the School has taxed our capacity. Boys whose response to discipline and training has been satisfactory over a reasonable period were conferenced for placement. Investigations of home situations were made; opinions of interested agencies and psychiatric clinics considered before applications for parole were forwarded. Boys from the Toronto area were discussed in conference monthly with the psychiatrist of the Juvenile Court and interested workers.

In the School a close check is kept on the progress of each boy by means of a Weekly Conduct Rating System. The movement of pupils from admission to placement has been more rapid than the year previous. The average length of stay has been shortened from 15.5 months to 13.1 months. Of the 241 placements, 114 spent less than twelve months in the School.

Foster Home placement continues to prove a satisfactory outlet for children whose homes are not suitable. The 72 placements show an increase of 9 over the previous year. Wards in foster homes are placed in employment on reaching the age of sixteen.

Throughout the year our records show nearly 400 wards receiving supervision outside the School.

The School has been subject to inspections during the year as follows:

1. Buildings and equipment.
2. Factory Inspector.
3. Department of Health—Pasteurizing and Dairy—Water.
4. Education—Courses of training.
5. Power Plant.
6. Dairy Herd—Federal Bureau of Animal Husbandry.

Throughout the year boys attended church in the Town of Bowmanville each Sunday. A boy is privileged to attend his own denominational church. Members of the Ministrial Association were invited to visit and talk to the various cottage groups throughout the Winter season. Sunday School is conducted in the School Building weekly under our own staff.

Several delightful entertainments were provided by visiting choirs, orchestras and concert parties.

Instruments for band and orchestra were purchased in time to start a music course in September. It has not been possible to attain any marked degree of proficiency in orchestral work, due to the large number of paroles from this group, but it was felt that the training objective had been reached in that most boys in this group will be able to participate in some way in junior orchestras in the municipalities to which they returned.

Academic Report.

The organization of the Academic Department remained the same as the year previous with no changes in the Staff.

The average enrolment of the academic school was slightly up, increasing the number of pupils in each grade. The average number in the grades was as follows:

Grade 9	20
Grade 8	43
Grade 7	36
Grade 6	32
Grade 5	24
Grades 3 and 4	16
Auxiliary	19
F. T. Academic	34 (including all Grades 1-7)

Practically all boys receive at least half day schooling, those under twelve attending school the full day. School is in operation the five ordinary days of the week and also Saturday morning.

The new curriculum as laid down for Grades 7 and 8 has been followed during the year.

New pupils upon admission are required to write a test paper, the result of which determines their academic grading.

Considerable time has been spent on music and music appreciation. During the year a radio was added to the academic equipment and this has added much through the musical programmes as well as special features. The school entered the Durham Festival as usual and won creditable rating in every section. We were successful in winning the shield for Choral Recitation, which was offered for the first time.

An orchestra was inaugurated in September under a special instructor. This group has its lessons on Monday afternoons, as follows:

1:00—1:30	Buglers.
1:30—2:30	Wind Section.
2:30—3:30	String Section.
3:30—4:00	Flageolets.
4:00—5:00	Combination of Wind and String for rehearsal.

In the bugle section, 50 have joined the group, 5 have been paroled, 2 transferred to other sections and 11 dropped because of no talent or interest. In the wind section, 27 were enrolled. From this group 6 were paroled. In the string section 21 were enrolled, 7 paroled and 2 dropped for disinterest. The flageolet group was a means of keeping up interest of those who were awaiting a place with the regular groups and also for developing talent. In this last group, 81 enrolled, 18 were paroled, 6 were dropped and 8 transferred to other sections. The orchestra has performed on numerous occasions at Chapel. Daily rehearsal of the orchestra under two members of the academic staff is held from 4:00—5:00 p.m.

In Grade 8 all 42 members of the class were allowed to write the Entrance. None who had been in the grade all year failed. 30 were successful in obtaining certificates, 8 being recommended. Of those who wrote, 7 had been in the class less than ten days.

Tests, when given, are not marked as a percentage but given a grading. This eliminates undesirable competition among the pupils. With every boy who leaves the School, an academic report is sent.

One academic member assists at the gymnasium daily from 4:00—5:00.

Another has charge of the library and the distribution of books to the cottages. The number of books catalogued in the library is 2,576, valued at $778.70. These are arranged in the library according to class of reading. Groups of twelve books are sent weekly to the cottages for reading. Twenty-five books were sent to the Hospital to start a library there. No new books have been received in the library proper. Three hundred and seventy-five used books were received during the Summer. These are valued at $56.65. Three hundred and thirty-one books were received for classroom and staff use as recommended in the new curriculum. These are valued at $205.21.

During the Summer months, a Forest School was conducted for the supervision of the smaller boys. Interest groups along with a few academic subjects were taken. This was under the care of the academic staff on duty with the help of two counsellors.

PHYSICAL DEPARTMENT.

Throughout the school year every physically-fit boy was a member of one of seven units, or classes that reported twice each week for regular periods of instruction in the gymnasium and swimming pool. This gave each boy 2½ hours of definite instruction weekly.

Besides these regular periods of instruction, all afternoon school groups attended a daily period of recreation between the hours of 4:00 and 5:00. There was a further period of recreation each Saturday morning from 10:30 until 12:00 for all boys attending full-time academic.

Saturday afternoon was given over entirely to organized sports, swimming and recreational activities, with the entire student body taking part.

Periods of Instruction in the Gymnasium.

The following work was covered in the regular periods of instruction:

Marching tactics, stressing posture, poise, rhythm and relaxation.

Danish fundamental and corrective gymnastics.

Apparatus work on the horizontal bar, parallel bars, side horse, long horse, tumbling on the mats, and rope climbing.

Skills, drills and playing rules in basketball, hockey, baseball, football, rugby, and touchball.

Track and field athletics (outdoors during September and October).

Group games.

Periods of Instruction in the Swimming Pool.

Instruction and drills in leg stroke, arm stroke, breathing, timing, rhythm, racing start, racing turns, in the following swimming strokes:

(a) Crawl (b) Back (c) Breast.

Instruction and training in springboard diving.

Diving to recover weighted, submerged objects.

General training for muscular development and stamina.

Athletic Groups for Organized Sports.

Something a little different was tried last Fall when we organized all the boys into athletic groups for all-round competition in all branches of sport rather than leagues for any specific game. Each group was composed of eleven boys; this number being sufficient for any athletic contest undertaken. Two schedules were drawn up, one for track and field athletics, and the other for games, for each of three sections, senior, intermediate and junior.

For competition in track and field, each boy was given an athletic grading as senior, intermediate, junior, or juvenile. Scoring tables for each event in each grade were prepared, giving point values, so that regardless of what group a boy might belong to he was scored according to his athletic rating.

Due to his scoring system every boy took part in every event, since all points he earned were added not only to his group's total but also to his individual total in the race for honors as champion of his grade. The group scoring most points in any scheduled athletic contest was declared winner and credited with a win in the group standing, while the losers were charged with a defeat.

Ten track and field events were scheduled over a period of two months.

While the schedule of games brought the groups together in proper order, no particular type of game was specified. Whenever two groups were scheduled to meet they could decide by mutual agreement to play any one of four different games. They might decide to field their full groups for football or touchball. Or on a very warm day they could agree to cut their groups to nine a side for a game of baseball. Another day is wet, so they decide to move indoors for basketball. Regardless of the type of competition, whether it be running broad jump, or a game of football, a winner and a loser is declared and the results entered in the group standing. The two schedules were so arranged that while one half of the groups was playing games, the other half would be contesting track and field events. This gave all groups organized competition every time out.

Difficulty was experienced in keeping the groups properly balanced due to the rapidity which our enrolment changed.

Championships, Special Events, Organizations.

Annual swimming and diving championships—20 events—46 boys competed in the preliminaries—34 boys competed in the finals.

Annual gymnastic championships—144 boys competed in the preliminary round on four pieces of apparatus—31 in the semi-finals—16 in the finals.

Leaders' Corps enjoyed a wonderful year and rated one of the best in the history of the School. 53 boys were members during the year; there never being less than 27 nor more than 32 at any time.

Annual demonstration in physical training was again the outstanding event of the year. 141 boys took part.

Organized League Sports.

Softball—Spring league—19 teams in 4 graded sections—194 boys—60 games.
  Midsummer league—17 teams in 4 graded sections—183 boys—127 games.
  Late Summer league—11 teams in 3 graded sections—115 boys—24 games. (Operated while boys on vacation).
  Total number of league games in softball—211.
Football—14 athletic groups in 3 graded sections—182 boys—111 games. (All time record due to open fall).
Basketball Fall League—13 teams in 4 graded sections—78 boys—25 games.
  Winter league—27 teams in 6 graded sections—212 boys—47 games.
  Spring league—10 teams in 3 graded sections—64 boys—39 games.
  Total number of league games 111.
Hockey—1 league—27 teams in 6 graded sections—212 boys—52 games.

COTTAGE LIFE.

There are five cottages, each with accommodation for forty boys and presided over by a Cottage Father and Cottage Mother. The object of this plan is to duplicate as nearly as possible ideal home conditions in a controlled environment. A quiet, orderly routine is insisted upon. Housework is done by alternating relays to give lads experience in all branches.

Recreation is carried on outdoors on the playfields and skating rinks when the weather is suitable. Boys are taught to play games; to enter into games although they know little about them; to sit at the reading, drawing or writing tables quietly and respect the work of others; to join in community singing; to share magazines and papers; to encourage backward or new boys to join in all activities; to play fairly and refrain from cheating; to read good books and share them.

In the large playrooms school homestudy assignments are done daily: Drawing, art work and hobby projects are engaged in. Extensive reading of books from the library, magazines and periodicles is encouraged.

Boys are taught to be clean and mannerly at the table; to be courteous to visitors; to receive people properly in the Cottage; to clean up the sitting room after entertaining his visitors; to be kind and helpful to new boys; to share parcels and to lend articles to boys not so fortunate as themselves; to share another boy's work voluntarily; to respect the property of others and to use proper language.

Personal hygiene is stressed. Boys are taught to shower properly, to brush their teeth daily, and to use his own comb, towel and tooth brush.

In the Dining Hall each boy is encouraged to take his turn in asking the blessing before meals.

In the Cottage each boy is encouraged to lead the prayer service at bed-time and to respect the other boys when at prayers by remaining quiet and mannerly.

AGRICULTURAL DEPARTMENT.

General Farm Conditions.

An average crop was harvested on the farm during the 1938 season. Continued dry weather during the month of July reduced the grain yield to some extent, but the quality was good. The hay crop was very good and harvested under ideal conditions. Corn, roots, and vegetables were also a good crop. The dry weather ripened the cobbler potatoes somewhat prematurely which reduced the yield.

Four pure bred Holstein cows were added to the herd during the year. We have now a herd of fifteen mature cows. We are raising eight heifer calves from this foundation herd. Our present herd is fully accredited and federally negative to the blood test.

The boys continue to take a good interest in the farm. Very few of them know anything about that kind of work when they come. They are taught how to do all the common farm jobs, so that they can go out and be useful help on a general farm. They are required to get up at 5:30 a.m. to assist with the morning milking and chores. The farm here provides an excellent place to teach a boy useful work habits. The majority of them have never had regular work of any kind and as a result have developed very careless work habits.

Farm Apprentices.

One hundred and nine boys were assigned to the farm during the year and were given farm training. Many of them became quite useful help. They could milk, handle horses, work the farm machinery, plough and do all the common farm operations. During the year, fifty-one boys were placed on outside farms to work for wages. The farm continues to be an excellent outlet for this type of boy. A few years spent on a farm has a steadying influence. It provides a good background for any kind of work that he may later take up. It also tides him over a difficult age and helps materially in his adjustment to a normal way of living.

Farm Improvements and Replacements.

1. All farm fence posts painted white.
2. 100 rods new wire fence erected.
3. Fence placed around dump area to prevent livestock injury.
4. Boulevards along front of farm levellel and seeded.
5. Hillside lawn at Darch House and Milk House levelled and seeded.
6. Roadway across flats graded, and tile put in side ditch to carry off water.
7. Bank around vegetable storage building levelled and sodded.
8. Drains put in to carry off water from eavestroughs on dairy barn.
9. Two acres apple orchard planted.
10. One half acre raspberry canes planted.
11. One quarter acre asparagus bed planted.
12. One quarter acre strawberry patch planted.
13. Four pure bred Holstein cows purchased.
14. One pure bred Shropshire Ram purchased.
15. One pure bred Yorkshire Boar purchased.
16. One work horse purchased.
17. One feed grinder purchased.
18. One tubular milk cooler added to dairy equipment.

Production Summary

Feed and Fodder	2,362.00
Garden and Orchard	1,026.60
Dairy, Milk and Cream	3,293.40
Poultry—Eggs	760.28
Old Hens	104.80
Dressed Poultry	230.65
Swine	1,548.65
Sheep—Lambs	70.52
Wool	17.90
Cattle—Cows	88.40
Calves	39.17
Seed Cleaning Plant	125.75
Hay Sold	245.50
	$9,913.62

HORTICULTURAL DEPARTMENT.

General Horticultural Conditions.

The horticultural department has care of the grounds, landscaping and greenhouse. The grounds are quite extensive and entail considerable work during the summer season. The lawns comprise over ten acres that have to be kept cut with the lawn mowers. In addition to this, there is the care of the perennial borders, shrubbery and flower beds.

Landscape Work.

The bank at the front of the gymnasium was levelled and seeded and trees planted. The ravine, north of the work shop, was cleaned out, the banks levelled and trees pruned. A new cement gutter was built from the culvert below South Lodge down to the creek. This will prevent the washing out of the sides and help in the landscaping of this area. North Lodge playgrounds were levelled and a rock garden started on the east bank. Grounds at the entrance were levelled and seeded. Fifty shade trees were set out.

Instead of the annual summer camp at the lake, the younger boys spent their time in a forest school down by the creek. They spend considerable time clearing up the grounds in that area. This makes a fine natural park among the cedars and other trees. This area comprises about five acres and is well wooded with a spring creek flowing through it.

Greenhouse Work.

A greenhouse 100′ x 20′ provides ample space to keep a seasonal display of flowers growing throughout the year. It also makes it possible to produce all the bedding plants and annuals required to supply the institution. All early vegetable plants are started in the greenhouse.

Horticultural Apprentices.

Sixty-eight boys received instruction in the growing and care of plants and the general care of the grounds, including shrubbery and flower beds. Each had a small section allotted to him in the greenhouse where he learned to take slips, propagate, and grow plants from cuttings to maturity. A considerable number of boys develop a real interest in the horticultural work.

GENERAL MAINTENANCE SHOP.

Projects.

The manufacture of metal framed fly screens for the Hospital windows.
Garbage cans.
Smoke pipe.
Roof flashing.
Gutters.
Wire coat hangers.
Repairing and sharpening 200 pairs of skates.
Making up special hinge pins for doors.
Erecting safety guards on machinery to comply with Factory Inspector's recommendations.
Machining new pump rod for water pump.
Grinding plough points.

Repairing kitchen equipment, shovels, rakes, forks, etc.

Floor polishers.

Making special bolts.

Cupboard brackets.

Braces for potting shelves in greenhouse.

Machining new valve stem for gate valve.

Making bolts, plates, etc., for attaching window closers to brick walls.

Iron pipe rails were installed in two farrowing pens in piggery.

Farm machinery received an overhaul and two coats of paint.

The School Building, Gymnasium, Superintendent's Residence, Herdsman's Cottage, Rose Arbour and Flag Pole each received two coats of paint.

The ceilings and walls of seven class rooms were painted, the woodwork was varnished, and the hardwood floors cleaned, sanded and refinished.

The auditorium received the same treatment.

The main office was completely renovated, having partitions removed, making the room considerably larger and brighter. A brass railing was erected making a small waiting room space. These alterations made it necessary to have considerable plastering done before painting.

Two smaller offices and three lavatories in the School Building were redecorated.

All woodwork and walls not papered in the Herdsman's Cottage were painted, and the walls and ceilings of the playrooms in North and South Lodges were painted.

Considerable repairs were effected by welding operations, such as the brazing of kitchen equipment, cutting and welding of pipe to make a hot water heating coil for kitchen, cutting opening in water tank and brazing a nipple into it. Welding cracks in jacket heater at dairy, welding wheelbarrows, legs on beds, cutting and welding steam lines in power house and hospital. Making up welded pipe clothes drying racks and laundry tub stands for hospital. Welded repairs on various farm machinery and school equipment.

Considerable road work was accomplished which made it necessary to haul some 150 yards of fine gravel from the creek and gravel pit.

Concrete projects required the hauling of upward of 100 yards of gravel from the camp beach to the school for this work.

The floor of the east wing of the Superintendent's Residence was shored up, the east wall needled and all the loose brick from the water course down to footing removed. The foundation was dug out an additional three-foot-six below grade level, a new concrete footing and wall poured, and the brick wall and buttress rebuilt. The outside of the wall was water-proofed and the hole filled in. It was then necessary to lay a new concrete walk and a set of concrete steps from the walk down to the garage entrance. A portion of the garage floor had to be removed, and a proper foundation laid, also broken tiles replaced to allow proper drainage under this section of the building.

Three street lighting poles were replaced by those taken from camp with the necessary repairs and replacements to wires and pole line hardware. Some work was necessary to tighten the guys on the balance of the street lighting system. Three additional light fixtures were hung to give added light on the grounds. A waterproof switch was installed to control the floodlight.

The servicing of the school truck and the washing of cars, added to the varied activities of this department.

WOODWORKING DEPARTMENT.

Projects completed by this Department include:

Woodwork.

5 dozen baseball bats.
Make and erect signboards at main entrance.
Erect shelving for stationery, school basement.
Remove partition in main office.
Erect platform and build steps, Superintendent's Residence.
Remove bunks from two cabins at camp.
Alterations to garage to accommodate truck.
Make and fit truck garage doors.
Make cabinet for office mail.
Cut cedar trees and make fence posts.
Erect fence posts around dump.
Make cupboards for kitchen.
Make 12 ice-scrapers for rink.
Make 2 benches for Jury Lodge.
Make coat rack for Dining Hall.
Make 2 hat and coat stands.
Make screens for greenhouse.
Make 50 folding chairs for Assembly Hall.
Repairs chairs and dresser for Kiwanis Lodge.
Miscellaneous repairs to furniture throughout school.
Fit up shelving in linen room in Gymnasium.
Repair doors, Gymnasium.
Make lockers, Gymnasium.

Painting.

2,350 fence posts.
22 gates.
1 bridge.
Chicken houses.
Refinish school desks.
Clean and shellac classroom floors.
Clean and paint interior of piggery.
Paint playground fences North and South Cottages.
Paint playrooms North and South Cottages.
Paint storm sash.

DINING HALL.

During the year, this Department served 232,685 meals. 191 boys received training in Dining Hall work. 50 of these were selected for training in cookery, 6 for pasteurizing work and 135 boys as kitchen helpers.

The fifty boys on the cookery course were given practical training in the making of cookies, cakes and pies; preparation of desserts and vegetables, and the cutting and cooking of meats. Six boys attained some degree of efficiency in making taffies, marshmallows, caramels and butterscotch candy.

Approximately thirty boys are assigned as waiters at meal hours. These are instructed in the setting of tables, serving staff, washing dishes and general clean-up after meals.

Menus are prepared on a ten day basis, passed on to the School Physician for his approval and returned to the chef for preparation.

The milk from the school farm is pasteurized daily. Samples are sent to the Department of Health for analysis once a month and a report sent to our Department.

Placement Officers' Report.

Boys receiving supervision beginning of period		315
Boys discharged during period		241
Boys re-admitted to the school	83	
Boys released from guardianship	76	
Boys working on farms	58	
Boys in sanatoria	4	
Boys in Working Boys' Home	9	
Boys attending school	192	
In other institutions	32	
Employed as messengers	19	
Employed in factories	14	
Employed in garages	2	
Miscellaneous positions	18	
Unemployed	25	
Employed at bush work	5	
Died	1	
Taken up residence in U.S.A.	2	
Elevator boy	1	
Greenhouse work	1	
Whereabouts unknown	14	
	556	556

Boys discharged during period		241
Placed in foster homes	72	
Placed on farms	50	
Working Boys' Home	9	
Home to attend school	44	
Home to seek employment	57	
Other institutions	8	
Died	1	
	241	241

Boys under supervision end of period	386
Number of visits to boys	2004
Homes investigated	295
Attendance at clinics and social agencies	98
Attendance at court	32
Other contacts	151

HEALTH REPORT.

Dental.

Number of patients at clinic	763
Number of examinations only	274
Patients treated	489
Number of extractions	259
Number of local anaesthetics	160
Number of fillings	988
Number of pyorrhoea treatments	27
Number of prophalix	361
Number of other treatments	37
Number of porcelain crowns	10
Dentures remade	1
Total number of operations	1,843

Medical.

Number of boys at daily clinic	7,632	
Number of boys seen by doctor		1,602
Number of general physical examinations (new boys)		185
Number of re-admissions checked by doctor		83
Number of patients in hospital		359
Number of hospital days	1,635	
Operations.		
Tonsils and Adenoids		29
Appendectomies		4
Circumcisions		2
Herniotomies		2
Paracentesis of ear drum		1
X-rays.		
Chest		204
Accidents, etc.		93
Tuberculin Tests administered		341

Mental.

The Mental Health Clinic from the Ontario Hospital at Whitby provides service whereby all boys admitted to the School are examined. Following the completion of the examination each boy is conferenced with the Clinic before assignment is made. Boys re-admitted for failure as well as those constituting special behaviour problems are also dealt with by the Clinic. During the year 134 boys were examined.

A. R. VIRGIN,
Superintendent.

REPORT OF
ST. MARY'S INDUSTRIAL SCHOOL, TORONTO

April 1st, 1938 to March 31st, 1939.

When preparing the Attendance Reports for the Advisory Board each quarter there is pause for consideration at the question, "What re-action to commitment?" These young girls are impenetrable at times and they wipe all feeling or emotion from the face. Perhaps a first letter home after admission might inform better. Such a letter would read much like this:

> Dear Mom and Dad,
>
> Well here I am and I wish I wasent. We got here at half past four and was I ever tired. The first thing was a bath that I dident need and then supper that I wouldent eat. I was to lonesome to eat anything. Say Mon how long must I stay here. You go to Mr. —— and tell him to do something to get me out of here soon, and say Mon send me some chocolates and fudge and candy and some raisin cake. We can wear our own clothes so send me my blue dress and my necklace and my shoes I lent Ann and my coat. We goto church every day and I dont like it and we say an awful lot of prayers and my knees get tired so dont forget to go to Mr. —— about getting me out, etc.

The letters which are written at later periods do not quite catch the flavor of the first one written while impressions are fresh. It would seem that the reaction takes time to disclose properly.

In residence were found many of the nationalities of southern Europe and there were present the right elements to stage a reproduction of the drama enacted and enacting there. Language difficulty was a hindrance all year, but these types furnished material for profound study. Beauty had a strong appeal. A passage of music, a few lines of heroic prose or poetry, an airplane against the blue would illumine faces in surprising manner. Parents of these races are always suspicious and, generally, refuse co-operation.

The year passed busily and the results were satisfactory. The Academic year ended bravely, and the usual number passed the Entrance and continuation examinations. High school work with Commercial Option proved attractive and the pupils displayed great interest. Their powers of concentration when striving after a definite end stood out clearly and they rode over obstacles.

It was a disappointment to them when, after having worked hard and secured the desired standing, they were obliged to start in domestic positions. It has been demonstrated here that when girls were paroled to parents a position at clerical or at factory work was in order. When they were not allowed to return to the parental home safety could not be found in such employments. At domestic work they have good food, background, comfortable sleeping apartments, laundry expenses allowed, and the anchorage of home life. The monthly pay permitted them to dress with taste and in the prevailing mode. There is no great overhead. If a girl of eighteen can learn the art of managing a home with economy, comfort and smoothness, she is training herself for an important duty in life. We were told by different social organizations that office work cannot be found for young girls without influence to aid.

Special attention was given to good housekeeping, good cookery, and the care of a dining room. They enjoyed the duties of arranging tables and serving meals. Music, art work, embroidery, lace-making, formed one course; plain sewing, knitting, darning and mending formed a second course; while the older and more thoughtful pupils were given charge of the power machines. They made all table and bed furnishings used in the School, they cut, fitted and made up all articles of dress, all curtains and hangings required, and they knitted pullovers and sweaters for personal use. Hairdressing was practiced as much as space would allow. They like this work and they dress with taste and becomingness.

There was no serious illness during the year, Dr. F. V. Hamlin attended one day each month for the purpose of interrogation, examination, diagnosis, and to prescribe when he found this necessary. He saw each pupil individually and privately and he came, apart from this service, as often as he was summoned. The specialists for teeth, eyes, nose and throat attended regularly and all recommendations were carried out. Dr. Colin Campbell performed an interesting operation on one of the pupils for the correction of a double squint. She is quite proud of her new face and she is comically attached to the doctor. It is amusing.

The radio was an unfailing source of entertainment. It was opened just often enough to arouse interest but not to provoke weariness or boredom. Programmes of musical or educational value, only, were allowed. They made good and intelligent use of the radio. One wondered occasionally at the clever and critical discussion which followed some particular programme. They can judge with so much discernment in all affairs except their own.

The subject of supervision was troublesome at times. When girls of eighteen are told that they are of age and that no one had right to supervise conduct or progress a situation is created which may easily contribute toward fresh delinquency. This happened too frequently.

Two facts were observed which encouraged the thought that the course of training had beneficial effects with a measure of permanency.

(a) In nearly all cases the mistresses of those homes where one of our wards was employed and where better positions were found asked for a second girl who had been trained in the School.

(b) Contact with the School was so faithfully maintained. Two afternoons each week were set apart for their visits and these afternoons were occupied, fully. There was found a frankness and simplicity in discussing their problems, and there was a docility in submitting to advice. Gradually, very gradually, do these young girls find their individual thread in the fabric of society and of good citizenship.

We take this opportunity to thank, cordially and sincerely, the Department under which the School functions and to thank each member of the staff. Kindness, assistance and co-operation were given, promptly and generously, in all doubt and difficulty. We thank, too, the members of the Advisory Board for the understanding and vision they show in the affairs of these young girls and for the wisdom of their recommendations.

THE SISTERS OF OUR LADY OF CHARITY.

REPORT OF ST. JOHN'S INDUSTRIAL SCHOOL

April 1st, 1938 to March 31st, 1939.

The daily routine of an institution that has been established for a number of years, (nearly half a century in the case of St. John's) precludes the noting of many extraordinary incidents. The smooth working of a program, the harmonious relationships between boys and staff, the gradual unfolding of the personalities under our care, make for the happiness of all concerned; they are not ready subjects for interesting reporting. The most startling fact that can be recorded is this very absence of unusual and disturbing incidents. Hence the annual report that merely chronicles the quiet progression of a well-ordered institution is bound to carry a large element of monotonous repetition from year to year.

Generally we are pleased to comment on the health of our boys. Their ruggedness and freedom from illness is the result of excellent medical and dental care, and the time-honoured recipe of plain living and high thinking, with the adequate scope for the exercising of their bodies is faithfully carried out. One cannot always avoid the epidemics that sweep through the country. This year we suffered a mild, but persistent attack of the flu, that at one time had seventy-five per cent of the school population in bed. Excellent and devoted care, strict adherence to medical instructions, and the sturdy frames of the lads enabled them to meet this set-back with only a minor discomforture. A few did suffer from complications that were also promptly attended. The tabulation of the medical treatment shows the degree to which we fortunately were able to deal with the problem.

Due to the generosity of Dr. Farquharson and the co-operation of the University of Toronto all the boys received tuberculin and Schick tests, and those in need of it were immunized. The kindness of eminent doctors like Drs. Gordon Fraser, Brown and McGavin made a deep impression on the boys, and we wish to express our gratitude to these large hearted medical men. Dr. Boyden, our house doctor, and Dr. Godsoe, our dentist, are very important factors in the maintenance of the health of our boys. The skilled services, and courteous attention of these two gentlemen have helped us to a large degree in maintaining our happiness. The medical and dental records are as follows:

24 tonsillectomy operations
12 circumcision operations
1 pneumonia
1 scarlet fever
1 mastoid operation
7 various surgical operations
8 received spectacles

We are pleased to state that the recovery in each instance was quite satisfactory.

Fifty-one dental clinics were held during the year. Three hundred and twenty-eight boys were seen by the dentist and two hundred and seventeen surveys were given. There were in all two hundred and eighty-two restorations, one hundred and twenty-seven extractions under novacain anaesthesia, forty-three synthetic porcelain fillings, thirty-one x-rays, three root canal dressings, eight phyorrea treatments and five cases that necessitated dental surgery.

Too much emphasis cannot be placed upon the religious training in a school of this type, and so the attendance at daily Mass, the recitation of the morning and night prayers and the lessons on religious knowledge are well adhered to.

As in the past our recreational program in competitive athletics with outside teams created great interest. Hockey, softball, baseball and lacrosse teams were entered in the Catholic Youth Organization. Our summer program is one to be envied by many a lad plodding the hot pavements of a large city. In addition to his half day in the shops the boy participates in such activities as drills, track and field work, daily swimming, fretwork, aeroplane building, music, etc. The latter part of the holidays are spent at Jackson's Point, Lake Simcoe.

After leaving the school immediate contact is made with the boy through our full time Placement Officer. This necessitated 759 visits. The school also corresponds with the boy and we believe this tends to make him feel more keenly our interest in his welfare. The parish priests and Big Brothers co-operate in taking active interest when it is felt advisable.

We have been pleased to co-operate as fully as possible with the recommendations of Inspector McJannet. Due to the age of the buildings and the rapid increase in the number of boys, our facilities have been somewhat strained at times. The modernization of some of our services has been gradually attended to, and we propose to leave nothing undone to safe-guard the safety and health of our inmates.

Brother Stephen,
Superintendent.

REPORT OF ST. JOSEPH'S INDUSTRIAL SCHOOL, ALFRED, ONTARIO

April 1, 1938 to March 31, 1939.

Attendance Report.

Number in Residence, April 1st, 1938	96
Number in Residence, March 31st, 1939	110
Average Daily Attendance	106

Health Report.

The health of the boys was good throughout the year except during the last week of February when sixty pupils were sick with the grippe for a few days. Each boy was examined not only on passing the threshold of the institution, but he had to undergo the regular physical examinations three times during the year. Generally speaking, the new recruits began to put on flesh the very first week of their stay in the training school. One boy died of diabetes during the month of February. This lad had run away and, not being able to find anything else, lived on bread and vinegar for some time. When he came back he was so weak that he had to be given insulin treatments three times a day. The doctor prescribed a diet, but the boy would never consent to follow it. The funeral services were held in our Chapel and the parents came to claim the body of their son. There was one case of contagious disease, but, as the patient was soon quarantined, nobody else was infected. We had three cases of pneumonia; one boy broke his arm and the mishap was attended to at once. There were to circumcisions made and four tonsilectomies. Doctor Tittley made: 55 visits and 509 examinations. On the recommendation of the medical doctor, eight boys were given the permission to take milk every day between meals. Our dentist was always very faithful to his duties. He expressed his satisfaction at the way the pupils kept their teeth clean after his first examination. He made: 43 visits, 169 fillings, 311 examinations and 97 extractions.

In August, 52 boys were given the privileges of enjoying a full week's vacation amidst healthful surroundings at a special Camp organized for them near the shore.

Academic Department.

This division was organized in the first days of September on the basis of a four-room school with a curriculum covering all the subjects of the primary grades to the Entrance Class. There were two full-time classes grouping 45 pupils from twelve to fifteen years old. Twelve children were sent to the school who had to be taught the elements of reading and writing as they probably never had had any schooling previous to their being sent to the institution.

Special Activities.

The following activities were also incumbent upon the same staff as the one in charge of the Academic Division:—The supervision of the library which was frequented by all the boys at certain times during the day. The authorities of the training school supplied this department with a good quantity of interesting books for each grade, from the first to the eighth. The books bought amounted to the sum of $150, distributed as follows: $75 for a dictionary; 75 books for the grades, $25; books of social studies, $50. Singing lessons were given every day in the morning and frequently in the afternoon when occasions were favorable. Instrumental music was taken as a hobby by twelve boys. 21 conferences illustrated with lantern-slides were given at the school on various interesting subjects. In order to improve the teaching in the lower grades, we supplied one class-room with all the material in use in a kindergarten. Every Sunday morning, an hour is set aside for the teaching of the rudiments of mechanical and ornamental drawings. There was also a Junior Red Cross Society grouping 45 members.

Religious Training.

Classes in religious instruction were given every day. We had again this year four separate groups: two English and two French groups. In order to improve the regularity of the religious training, we obtained the services of a clergyman whose special duties were to look after the spiritual interests of the whole school. His mission was to attend to the Chapel and give a weekly talk to the boys in their respective classes. As he is familiar with both languages, his sermons and talks were made either in English or in French, alternately. We found out that this new initiative produced good results and improved the school spirit decidedly. In fact, we had very few escapes to deplore compared to the other years. As our new Chaplain celebrated the tenth anniversary of his ordination to the priesthood on the Second of February in our institution, a specially interesting program was rendered by the boys on this occasion. As an incentive to better behaviour, we gave a weekly conference to the whole school in both languages and we profited by the occasion to reward those pupils whose conduct was not only satisfactory but very good. One boy made his first communion and two special missions were preached, one in September and another at Easter. Christmas Day was the occasion of an unusual celebration at the school for a Christmas tree donated by 43 benefactors was enjoyed by the pupils and a few invited friends of the institution, at a meeting held in the reception hall. The tree was decorated with over 200 articles including gifts of all kinds, as: caps, suits, sweaters, skates, boots, candies, etc.

Physical Training.

As usual gymnastics were rightly considered as an important part of our recreational program. It was also designed to provide active participation for many if not for all according to age and ability. The boys were divided into two groups numbering 96 athletes in all, an increase of 21 over last year's number. During the dull seasons the program was augmented and the pupils performed gymnastic exercises in the afternoon as a recreation. The classes were subdivided into small groups to secure more attention and efficiency. The Sword Dance was very popular not only with the participants but also with the spectators who came to the school from time to time to enjoy a gymnastic program. We found out that these gymnastic exercises produced good effects on the boys, specially in developing in them the habit of quick decision and attention. During the winter months we kept two rinks at the disposal of the boys and both were always very busy. Our athletes gave exhibitions of their skill at: Billing's Bridge, Glen Robinson, where the boys had to appear six times on the stage, Moose Creek, and two performances at the District Exhibition. The organized games as baseball, hockey, pass-the-ball game, were very popular as usual. The players, in order to be allowed to play in the first hockey or baseball team, had to be in one of the four gymnastic groups; this initiative placed the gymnastic instructor in a better position to do more effective work and obliged the pupils to behave properly if they wished to have the privilege of enjoying a good game of baseball or hockey.

VOCATIONAL TRAINING.

Woodworking.

Thirty-two pupils wer apprenticed to this department. They made: one summer camp, three miniature houses, tables, picture-frames, 112 bird-houses, eleven baseball bats, tool handles, lamp-stands, candlesticks and table legs. In the Basketry division five boys found regular occupation in making baskets, silhouettes, fern stands, and jardiniere stands. The maintenance work included all the wood work done in the house during the year either for repairs or for new accommodations.

The Bookbinding Department was transferred to the basement of the Main Building early in the year. Five apprentices were occupied in repairing and rebinding books as a regular shop work. 215 books were rebound. We equipped this shop with the following machines:

1 Press, costing	$20
2 Cutting Machines	$62
1 Sewing Machine	$15

SHOE DEPARTMENT.

The Shoe Department has been very active this year. New equipment and additional space made it possible to accommodate larger classes and increase the production. The shoe-shop was enlarged and occupied the whole basement floor in a separate pavillion near the Main Building, and was provided with a spacious stock-room and store. In order to recover this space we had to tear down the walls of the partitions in the basement and block one opening that was in the way. The boys themselves did most of the work and were always ready to lend a helping hand any time that they were wanted outside the regular shop or practice hours. We had seventeen apprentices in this department and seven full-time workers. Two were employed in general repairs. Seven begin to know the trade and do their work with very little assistance. We bought new machines and now the shop is in a position to supply the house with fancy shoes as well as working boots. 900 pairs of shoes, 50 pairs of slippers and 40 skating boots were made. The maintenance work included the mending of more than 850 pairs of boots during the year. Four boys were given positions as shoemakers and three succeeded in keeping their places. Two boys of this department polished the shoes of the staff and pupils once a week. The following machines were added to the outfit of the shoe-shop:

1	Sewing Machine at a cost of	$50
1	Beam Cutter	$175
63	Blocks	$176.40
56	Patterns	$100
1	Sole Sewing Machine	$375
1	Curved Needle Stitcher	$450
1	Trimming Machine	$ 11
1	Skate Sharpening Machine	$ 65
3	Movable Racks	$ 15
2	Jacks (Crispin)	$ 20
1	Shoe Support	$ 6
1	Form Jack (Sovereign)	$ 14

Tailoring Division.

There were thirty-eight apprentices in this department and nine full-time workers; four pupils begin to know the trade pretty well. This division is credited with making: 122 complete suits, 85 trousers, 24 aprons, 133 shirts. In the fall and during the winter months, we secured the services of an expert tailor from Ottawa who came to the institution once a week and who gave 30 lessons in the art of cutting garments. One instructor and nine boys followed this course. This initiative cost $75 to the school, not including transportation, board and lodging expenses. The maintenance work consisted in mending more than 250 articles of clothing every week. As usual some of the ladies of the locality devoted a certain amount of their time in repairing the socks of the pupils.

Metal Work Department.

There was only one boy learning this trade, but at times, seven or eight pupils were employed doing odd jobs in and around the house. Most of the work consisted entirely of products for the immediate use of the institution except four sleighs made during the winter. All the plumbing was done by them and their instructor. They worked for three months doing repairs to the heating system of the Main Building. They built a new garage at a cost of $300; they installed a new furnace, the pipes and furnace costing $400. They improved the drainage system, cemented the shoe-shop, made sidewalks on the property and built a small brick shed for the garbage cans. Finally, they repaired the agricultural implements and made several small tools for the use of the house and the farm.

Miscellaneous.

The bakery was improved and the floor space increased by tearing down a wall between the kitchen and the bakery. The floor of the kitchen, bakery, washing-room and boys' refectory were terrazzoed at a cost of $1,112. The pupils helped in painting two dormitories, two staircases, one of the corridors and one of the two recreation halls. The washing and drying systems have been improved and the result was a yearly economy of $300 in electricity. We started to can fruits and vegetables and succeeded in canning 800 gallons, most of which were used for consumption in the school. We bought one canning machine for $45 and boxes for $80. Lastly, we erected a small penthouse to be used for salting and smoking ham and bacon for the institution.

AGRICULTURAL DIVISION.

Ten boys worked on the farm. However on special occasions, specially in August and September we got as many boys as were necessary to help around the farm and speed up the harvest in order that nothing be lost through lack of harvesters.

The Farm Products Were:

Potatoes	760	Bags
Tomatoes	2,000	Gallons
Turnips	10	Tons
Beets	15	"
Carrots	7	"
Onions	2	"
Hay	62	"
Ensilage	70	"
Grain	1,200	Bus.

Animals:

Horses	3
Cattle	26
Swine	23

At the District Exhibition held at Alfred, the School obtained 15 First Prizes and 3 Second Prizes.

MAPLE-SYRUP INDUSTRY.

As the season was very short the crop was rather poor this year. However four boys worked in the maple bush for three weeks in the spring. We gave permission to the pupils to enjoy an outing at the sugar bush and have lunch at the log cabin. We divided the boys into three groups of 40 each. This innovation proved to be an excellent object lesson to the pupils because none of them had any idea of how maple-syrup was made before coming to the school. Some of them thought that our Canadian syrup was made by pouring water over a certain quantity of cane sugar. During the season 700 maples were tapped, 37 barrels of sap were collected and 103 gallons of syrup were made and 12 parties from Ottawa and vicinity came to the camp and sugar bush.

PLACEMENT OFFICER'S REPORT.

Number of Visits Made to Boys	192
Boys Placed in Foster Homes	10
Returned Home to Attend School	14
Miscellaneous Positions	12
Unemployed	11
Whereabouts Unknown	1
Returned to the School	20

At the request of the Department, we tried and succeeded to find good positions for certain boys who had stayed in our institution for more than two years. The Staff was augmented by one additional hand in September.

BRO. JEROME,
Superintendent.

STATISTICAL REPORT ADVISORY BOARD FOR INDUSTRIAL AND TRAINING SCHOOLS

April 1st, 1938 to March 31st, 1939

NUMBER OF CASES REVIEWED

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.	Total.
Designations	32	66	53	63	183	397
Applications for Admission to Training Schools Approved	—	—	—	16	41	57
Returns to Institutions	9	39	19	42	74	183
Paroles Recommended to Minister and made effective	54	98	60	136	301	649
Paroles Refused	19	8	5	13	15	60
Placement Reports	43	159	93	157	621	1073
Attendance Reports	190	223	268	116	374	1171
Wardship Terminated	10	34	20	14	77	155
Requests for Termination of Wardship Refused	1	—	—	—	4	5
Deaths	—	—	1	—	1	2
TOTAL	358	627	519	557	1691	3752

Number of Meetings Held	52
Average number of cases reviewed at each meeting	72

INDUSTRIAL AND
COMMITTALS
For Year Ending

	Committed by Court	Admitted by Application	Total	Male	Female	City	Town	Township	Ages								
									8	9	10	11	12	13	14	15	16
Algoma District	7	....	7	6	1	5	1	1	.	.	..	..	1	1	3	2	..
Brant	1	....	1	1	..	1	..	..	.	.	..	..	..	1	...	...	..
Bruce	6	....	6	5	1	...	4	2	.	1	..	..	..	1	1	3	..
Carleton	14	....	14	10	4	14	..	..	.	.	..	1	..	4	4	5	..
Cochrane District	15	....	15	11	4	9	3	3	.	.	..	1	2	3	2	7	..
Dufferin	1	....	1	1	..	...	1	..	.	.	..	..	..	..	...	1	..
Elgin	2	1	3	2	1	2	..	1	.	.	..	..	..	1	1	1	..
Essex	15	....	15	13	2	12	1	2	.	.	..	1	3	2	5	4	..
Frontenac	3	1	4	2	2	4	..	..	.	.	..	..	..	1	1	2	..
Grey	2	....	2	1	1	2	..	..	.	.	..	..	..	1	...	1	...
Haliburton	3	....	3	3	..	...	1	2	.	.	..	..	..	2	...	1	..
Halton	2	....	2	1	1	...	2	..	.	1	..	..	1	..	...	...	..
Hastings	12	....	12	5	7	8	4	..	.	.	1	..	..	5	4	2	..
Kenora District	6	....	6	6	..	...	5	1	.	.	1	1	..	1	2	1	..
Kent	11	....	11	5	6	5	2	4	.	.	1	..	3	2	3	2	..
Lambton	5	1	6	5	1	6	..	..	.	1	1	1	..	3	...	...	..
Leeds-Grenville	1	....	1	...	1	...	..	1	.	.	..	..	..	..	1	...	..
Lennox-Addington	2	....	2	2	..	...	2	..	.	.	..	..	..	2	...	...	..
Lincoln	6	....	6	5	1	6	..	..	.	.	..	..	1	1	2	2	..
Middlesex	13	1	14	10	4	10	1	3	.	.	..	1	2	1	4	6	..
Muskoka District	3	....	3	2	1	...	3	..	.	.	..	..	..	..	2	1	..
Nipissing District	9	....	9	9	..	3	6	..	.	.	1	2	1	2	...	3	..
Ontario	9	....	9	4	5	3	4	2	.	.	..	1	1	..	2	5	..
Oxford	1	1	2	...	2	2	..	..	.	.	..	..	1	..	1	...	..
Peel	1	....	1	1	..	...	..	1	.	.	..	..	..	..	1	...	..
Perth	5	....	5	4	1	5	..	..	.	.	..	..	1	2	1	1	..
Peterborough	2	....	2	1	1	2	..	..	.	.	..	1	..	..	...	1	..
Prescott-Russell	1	....	1	1	..	...	1	..	.	.	..	..	..	1	...	...	..
Prince Edward	1	....	1	1	..	...	..	1	.	.	..	..	..	1	...	...	..
Rainy River District	2	....	2	2	..	...	2	..	.	.	..	..	..	2	...	...	..
Renfrew	8	....	8	3	5	...	6	2	.	.	..	..	..	4	1	3	..
Simcoe	29	....	29	25	4	...	26	3	.	1	3	2	3	5	7	8	..
Stormont, Dundas and Glengarry	16	1	17	15	2	9	..	8	.	1	1	1	2	2	4	6	..
Sudbury District	22	....	22	19	3	10	2	10	.	.	..	..	1	6	7	8	..
Temiskaming District	7	2	9	6	3	...	9	..	.	.	..	1	..	3	3	1	1
Thunder Bay District	14	1	15	13	2	15	..	..	.	.	..	1	..	1	7	6	..
Victoria	1	1	2	...	2	...	2	..	.	.	..	..	..	..	1	1	..
Waterloo	8	....	8	5	3	7	1	..	.	.	..	..	..	1	4	3	..
Welland	6	....	6	5	1	1	4	1	.	.	1	1	2	..	1	1	..
Wellington	4	....	4	4	..	4	..	..	.	1	..	..	..	..	3	...	..
Wentworth	29	....	29	19	10	29	..	..	.	1	1	2	3	3	8	11	..
York	38	46	84	70	14	76	1	7	1	2	7	4	8	18	24	20	..
Total	343	56	399	303	96	250	94	55	1	9	18	22	36	83	110	119	1

TRAINING SCHOOLS AND ADMISSIONS

March 31st, 1939

	Ward of C.A.S.		Others		Cause of Committal or Admission									
	Legitimate	Illegitimate	Legitimate	Illegitimate	Arson	Assault	Breaking and Entering	Forgery	Immorality	Incorrigibility	Obstructing Railway & Damage	Theft	Truancy	Vagrancy
Algoma District	..	...	7	...	...	...	3	.	...	1	....	3	...	...
Brant	..	...	1	...	...	...	...	.	...	1	....	...	...	...
Bruce	..	...	5	1	...	...	1	1	...	2	....	1	1	...
Carleton	..	...	14	...	...	...	3	.	...	3	1	5	2	...
Cochrane District	..	...	14	1	...	...	3	.	4	...	1	7	...	...
Dufferin	..	...	...	1	...	...	...	.	1	...	....	...	...	...
Elgin	1	...	2	...	...	...	...	.	1	1	....	1	...	...
Essex	3	1	11	...	...	1	1	.	2	5	....	6	...	...
Frontenac	..	...	2	2	...	...	...	.	...	1	....	2	...	1
Grey	..	...	2	...	...	...	...	.	...	1	....	...	1	...
Haliburton	..	...	3	...	...	...	...	.	1	...	....	2	...	...
Halton	..	...	1	1	...	...	...	.	...	...	....	1	1	...
Hastings	..	...	12	...	...	...	1	.	...	8	....	3	...	...
Kenora District	..	...	6	...	...	...	2	.	1	...	....	2	1	...
Kent	..	1	10	...	...	...	...	.	5	2	....	3	1	...
Lambton	..	1	5	...	...	...	...	.	...	...	....	4	2	...
Leeds-Grenville	..	...	...	1	...	...	...	.	...	...	....	1	...	...
Lennox-Addington	..	...	2	...	...	...	2	.	...	...	....	...	...	...
Lincoln	2	...	4	...	...	...	3	.	...	3	....	...	...	...
Middlesex	1	...	12	1	...	...	1	1	1	5	1	5	...	...
Muskoka District	..	...	3	...	...	...	...	.	...	1	....	1	...	1
Nipissing District	2	...	7	...	...	...	2	.	...	5	....	2	...	...
Ontario	..	...	8	1	...	...	1	.	...	2	....	5	...	1
Oxford	1	...	1	...	...	...	...	.	...	1	....	1	...	...
Peel	..	...	1	...	...	...	1	.	...	...	....	...	...	...
Perth	..	...	4	1	...	...	1	.	1	2	....	1	...	...
Peterborough	1	...	...	1	...	...	...	.	...	2	....	...	...	...
Prescott-Russell	..	...	1	...	...	...	...	.	...	...	....	1	...	...
Prince Edward	..	...	1	...	...	...	...	.	...	...	....	1	...	...
Rainy River District	..	...	2	...	...	...	2	.	...	...	....	...	...	...
Renfrew	..	...	8	...	...	...	1	.	2	4	....	1	...	...
Simcoe	..	2	26	1	...	1	5	.	1	6	1	10	2	3
Stormont, Dundas and Glengarry	2	...	15	...	...	1	5	.	1	1	....	9	...	...
Sudbury District	1	...	21	...	1	...	5	.	...	2	....	14	...	...
Temiskaming District	2	...	7	...	...	...	2	.	1	2	....	2	2	...
Thunder Bay District	..	...	15	...	...	...	1	.	...	2	....	9	1	2
Victoria	2	...	...	...	...	...	...	.	1	...	....	...	1	...
Waterloo	..	...	7	1	...	...	...	.	...	1	....	6	...	1
Welland	..	...	6	...	...	...	...	.	...	2	....	2	2	...
Wellington	..	...	4	...	...	...	3	.	...	...	....	...	1	...
Wentworth	3	...	24	2	...	...	4	.	4	8	....	8	5	...
York	4	4	74	2	...	...	5	.	1	41	....	27	8	2
TOTAL	25	9	348	17	1	3	58	2	28	115	4	146	31	11

SUMMARY OF ATTENDANCE IN INDUSTRIAL AND TRAINING SCHOOLS

April 1st, 1938 to March 31st, 1939

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.	Total.
Number in Residence, April 1, 1938	62	127	96	60	192	537
New Commitments or Admissions	34	65	53	62	185	399
Returned from Parole:						
Violation of Parole	3	11	12	17	52	95
Not satisfactory	2	5	—	7	7	21
Services no longer required	—	4	2	12	1	19
Pupils dissatisfied	3	4	5	2	1	15
For re-placement	1	8	1	16	16	42
For further training	—	4	—	6	5	15
Court Order	—	5	—	—	1	6
Returned from A.W.L.	3	28	9	48	119	207
Total	108	261	178	230	579	1356
Number of Placements:						
Returned home for school	—	15	14	6	44	79
Returned home to assist parents	6	6	7	—	2	21
Returned home for employment	3	25	14	5	55	102
To Boarding Home	4	24	10	31	72	141
To positions (farm, domestic, etc.)	13	20	9	41	50	133
Other Institutions	6	—	3	16	17	42
Number A.W.L.	4	33	10	50	124	221
Number of Deaths	—	—	1	—	1	2
Total	36	123	68	149	365	741
Number remaining in Residence March 31st, 1939	72	138	110	81	214	615

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.	Total.
Number remaining out for whole year	24	66	50	64	302	506
Number placed and returned during year	8	24	7	35	38	112
Placed out during previous years and returned during present year	1	17	13	25	45	101

RETURNED FROM PLACEMENT DURING YEAR

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.	Total.
After one placement	7	22	18	31	55	133
After two placements	2	11	2	18	20	53
After three placements	—	6	—	8	8	22
After four placements	—	1	—	2	—	3
After more than four placements	—	1	—	1	—	2
Total	9	41	20	60	83	213

NUMBER OF COURT APPEARANCES PRIOR TO COMMITMENT OR ADMISSION

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.	Total.
None	28	16	30	35	76	185
One	2	16	11	21	37	87
Two	4	15	7	3	26	55
Three	—	4	—	1	23	28
Four	—	5	2	1	11	19
Five or more	—	9	3	1	12	25
TOTAL	34	65	53	62	185	399

NATIONALITIES OF PUPILS COMMITTED OR ADMITTED

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.	Total.
Indian	—	1	—	1	5	7
Hebrew	—	—	—	—	2	2
Negro	1	—	—	1	1	3
Canadian	33	60	51	55	167	366
Irish	—	—	—	—	1	1
English	—	—	—	—	—	—
Scotch	—	1	—	—	2	3
United States of America	—	—	—	3	—	3
Other	—	3	2	2	7	14
TOTAL	34	65	53	62	185	399

SCHOOL ROLL AND COMPARISON

	Bed Capacity	In Attendance Mar. 31 1935	In Attendance Mar. 31 1936	In Attendance Mar. 31 1937	In Attendance Mar. 31 1938	In Attendance Mar. 31 1939
Alexandra (Closed Mar. 1936)	143	107	—	—	—	—
Girls' Training School, Galt	94	46	52	46	60	81
St. Mary's Industrial School, Toronto	80	71	65	59	62	72
St. John's Industrial School, Toronto	150	90	102	107	127	138
St. Joseph's Industrial School, Alfred	136	64	69	93	96	110
Boys' Training School, Bowmanville	224	194	172	188	192	214
TOTAL		572	460	493	537	615
Girls		224	117	105	122	153
Boys		348	343	388	415	462

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.
Average length of stay in the School, per pupil	2 years 11 months	1 year 8 months	1 year 5 months	1 year 3 months	1 year 1 month
Per diem cost per capita	$0.94	$0.99	$0.96	$1.36	$0.66

MENTALITY OF PUPILS COMMITTED OR ADMITTED

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.	Total.
Morons—I.Q. 45-60	3	1	5	2	5	16
High Grade Morons—I.Q. 60-70	7	9	11	4	20	51
Borderline—I.Q. 70-80	7	11	17	19	40	94
Dull Normal—I.Q. 80-90	10	13	10	15	66	114
Normal—I.Q. 90-100	7	22	8	13	37	87
Normal—I.Q. 100-110	—	5	1	4	11	21
Superior—I.Q. 110 and over.	—	4	1	5	6	16
TOTAL	34	65	53	62	185	399

FACTORS CONTRIBUTING TO DELINQUENCY OF THOSE COMMITTED OR ADMITTED

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.	Total.
Alcoholic Parents	—	1	3	1	—	5
Desertion in Home	2	3	1	2	7	15
Either parent immoral	6	1	5	4	4	20
Either parent mental defective	—	1	5	2	9	17
Either parent with court record	—	5	3	—	8	16
Father dead	—	3	5	5	15	28
Mother dead	—	7	1	9	13	30
Parents dead	—	—	1	2	2	5
Fair home but no control	9	16	4	6	31	66
Poor home and no control	7	15	20	16	65	123
Stepfather	—	1	1	1	—	3
Stepmother	—	—	—	1	—	1
Parents separated	6	3	4	11	11	35
Associations	—	8	—	2	11	21
Mentality of Child	4	1	—	—	9	14
TOTAL	34	65	53	62	185	399

ACTIVITIES OF RESIDENTS DURING YEAR

	St. Mary's Industrial School, Toronto.	St. John's Industrial School, Toronto.	St. Joseph's Industrial School, Alfred.	Girls' Training School, Galt.	Boys' Training School, Bowmanville.
Full time in Classroom	50	12	48	18	75
Part time in Classroom	22	118	60	63	386
Full time in Vocational Shops	—	8	13	101	14
Part time in Vocational Shops	72	118	—	63	610
Culinary Department	50	24	6	59	191
Sewing	70	—	16	114	—
General Domestic	30	—	—	59	—
Hairdressing	10	—	—	15	—
Barber Shop	—	4	3	—	60
Book Binding	—	—	3	—	—
Carpentry	—	5	18	—	—
Farming and Horticulture	—	21	11	—	177
House Maintenance	—	8	1	182	—
Laundry	—	—	2	22	—
Metal Work	—	—	1	—	236
Printing	—	13	—	—	—
Shoemaking	—	23	11	—	82
Tailoring	—	28	14	—	—
Wood Working	—	—	6	—	232

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